CLINICAL CASES SERIES

# Clinical Cases for General Practice Exams

*Second edition*



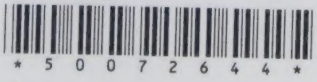
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CLINICAL CASES SERIES

# Clinical Cases for General Practice Exams

## 2nd edition

DR SUSAN WEARNE

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# Foreword

Preparing for examinations can be a daunting task. In Australia general practitioners demonstrate our competency by passing examinations that show we meet the exacting standards required for providing high quality general practice care.

Dr Susan Wearne is an experienced general practitioner, medical educator and examiner, and the new edition of *Clinical Cases for General Practice Exams* is a welcome contribution to assisting examination candidates. Medical students will also find this book helpful in preparing for clinical examinations.

The cases reflect the diversity of ages, conditions and cultural backgrounds among the people who consult us every day in Australian general practice.

Putting our learning into practice is a key skill in examination preparation, as is determining our own continuing education needs. Examination candidates will find the references and further reading for each case particularly useful. Once candidates familiarise themselves with each clinical case, they should be well on the way to being able to manage a wide range of common clinical problems.

The instructions for examination preparation and study are particularly valuable, especially the advice about studying with peers in a group. We depend on our professional peers and this study method provides a useful model for professional collaboration later in each general practitioner's career.

Dr Susan Wearne continues to make a valuable contribution to Australian medical education. I am certain this second edition of her popular book will find a place in the education and training of Australia's future general practitioners.

Professor Michael Kidd AM
Executive Dean, Faculty of Health Sciences, Flinders University, Australia
President, The Royal Australian College of General Practitioners (2002–2006)
President-elect, The World Organization of Family Doctors (Wonca)



# About the author

## Dr Susan Wearne BM MMedSci FRACGP FACRRM MRCGP DRCOG DCH DFFP GCTEd

Susan qualified in medicine in 1987 at Southampton University and undertook GP training in Northamptonshire and Cheshire, England. She was a GP principal in training practices in Manchester and York, and taught communication skills in the Department of General Practice at Leeds University from 1995 to 2000.

Nearly ten years ago Susan moved to the desert region of Central Australia and found an oasis of opportunities in medical practice, education and research. She worked at Central Australian Aboriginal Congress and in private practice at Bath Street Medical Centre. She was the Chair of the Central Australian Division of Primary Health Care, inaugural Chair of Northern Territory General Practice Education, a Medical Educator for the Remote Vocational Training Scheme and Chair of Living Waters Lutheran Primary School.

Susan is now a GP and GP supervisor at Central Clinic, Alice Springs and provides the RFDS Rural Women's GP service at Ayers Rock Medical Centre, Yulara. She is a Senior Lecturer in Clinical Educator Development with the Flinders University Rural Clinical School and a topic coordinator for the Master of Clinical Education program at Flinders. She is also an examiner for the Royal Australian College of General Practitioners clinical examination, a Medical Educator for *gplearning* and writer for the Australian College of Rural and Remote Medicine StAMPS examination.

Susan's husband, Tim Henderson, is the ophthalmologist at Alice Springs Hospital and provides a visiting specialist service to 42 Aboriginal communities over an area of half a million square kilometres. Susan and Tim enjoy the company of their two teenage children, Charlotte and Michael. Susan's spare time is spent swimming, sewing and learning to play the piano; one day she might be good enough to perform in public!



# Preface

This is the book that I looked for when I first moved to Australia. A group of GP registrars were preparing for their Fellowship exam and wanted me to help them. Examples of clinical cases did not exist so I began writing questions. This book is the teaching material that I have developed, used and refined over the past nine years.

It has been rewarding to hear the many stories of doctors who found the first edition useful. Doctors have persuaded non-medical friends, partners and spouses to be the role-playing patient and the instructions have proved adequate to provide realistic exam practice.

One GP registrar expressed concern that the book was too 'cook book' or formulaic. Forgive me if I have unintentionally promoted uniformity. Each time I see a GP at work or in a role-play, I see new and different ways of being a GP. Each of us brings our personality and experience to the consultation but there are some core principles that apply to each consultation. I hope that my practice will forever include the formula of an introduction, building rapport to understand something of the person's life and situation, hearing their concerns, assessing the problem in bio–psycho–social terms and working with them to create a plan that they understand and want to implement. How I achieve these core principles varies for different patients and makes the job both challenging and satisfying.

Most of the cases are adapted from my clinical practice and identifying details have been changed to protect the patient's identity. If you think you can spot yourself or a friend it is only because these cases cover common clinical conditions. I appear in them and, with their permission, so do many of my family members.

I hope that this book assists medical students, international medical graduates, GP registrars and GPs to learn more about the art and science of being an effective GP.

# Acknowledgments

I would like to thank everyone who helped me to write the second edition of this book.

The Remote Vocational Training Scheme (RVTS) funded by the Commonwealth Department of Health and Ageing made a significant contribution. RVTS supported me to write and trial new cases for registrar workshops. Colleagues at RVTS, Dr Pat Giddings, Dr Louise Baker and Dr Trudi Cullinan, reviewed and refined the cases. RVTS registrars and supervisors provided further critique.

Other generous colleagues helped: Dr Tyler Schofield, Dr Daniel Cloughton, Dr Danielle Butler and Dr Katrina Page gave constructive feedback on cases they used to practise for their RACGP Fellowship exams. Dr Louise Butler, Dr Sarah Koh and Dr Charles Mutandwa voluntarily took time out of their busy lives as GPs and educators to review cases. Dr Ann Dunbar and Angela Beilby trialled cases with international medical graduates preparing for the Australian Medical Council exams. Dr Tim Henderson, Ophthalmologist, Alice Springs Hospital, advised on the new Case 27 in Section 11.

The photograph in Figure 2 was supplied by the National Psoriasis Foundation; the Eczema Association of Australasia Inc. provided the photograph for Figure 3; and Dr Brendan Bell supplied the ECG in Figure 4.

Dr Ndidi Victor Ikealumba took on the task of reviewing all the cases and pointed out inconsistencies and suggested improvements.

I would also like to express my appreciation to all those who helped with the previous edition of this book: Dr Linda Samera, Professor John Wakerman, Dr Ethel Gilbert, Dr Patrick Mutandwa, Dr Nina Kilfoyle, Dr Chris Lesnikowski, Dr Rob Roseby, Dr Peter Tait and Dr Rupa Vedantam.

Lastly, thank you to the staff at McGraw-Hill who have been encouraging and professional throughout the production process.



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# List of abbreviations

| Abbreviation | Meaning |
|---|---|
| ACE | angiotensin converting enzyme |
| ACR | albumin-creatinine ratio |
| ACRRM | Australian College of Rural and Remote Medicine |
| ADHD | attention deficit hyperactivity disorder |
| ADT | adult diphtheria-tetanus vaccine |
| AFB | acid fast bacilli (tuberculosis) |
| alb | albumin |
| b.d. | twice a day (*bis die*) |
| bili | bilirubin |
| BMI | body mass index |
| BP | blood pressure |
| BSL | blood sugar level |
| CABG | coronary artery bypass grafting |
| Chol | cholesterol |
| CI | confidence interval |
| CK | creatine kinase |
| Cl | chloride |
| Coags | coagulation tests |
| COPD | chronic obstructive pulmonary disease |
| CPD | continuing professional development |
| Creat | creatinine |
| CRP | C-reactive protein |
| CT | computerised tomography |
| CXR | chest X-ray |
| DNA | did not attend |
| DVT | deep venous thrombosis |
| ECG | electrocardiogram |
| EDNOS | eating disorder not otherwise specified |
| ELISA | enzyme linked immunosorbent assay |
| ERCP | endoscopic retrograde cholangiopancreatography |
| ESR | erythrocyte sedimentation rate |
| FBC/E | full blood count/examination |
| FEV1 | forced expiratory volume in 1 second |
| FSH | follicle stimulating hormone |
| FVC | forced vital capacity |

| | |
|---|---|
| GA | general anaesthetic |
| GGT | gamma-glutamyl transferase |
| GP | general practitioner |
| GTN | glyceryl trinitrate |
| Hb | haemoglobin |
| HbA1c | haemoglobin A1c |
| $HCO_3$ | bicarbonate |
| HDLChol | high density lipoprotein cholesterol |
| Hep B | hepatitis B |
| Hib | haemophilus influenzae type B vaccination |
| HIV | human immunodeficiency virus |
| HRT | hormone replacement therapy |
| IBS | irritable bowel syndrome |
| IM | intramuscular injection |
| INR | international normalised ratio |
| IUCD | intrauterine contraceptive device |
| IV | intravenous |
| JVP | jugular venous pulse |
| K | potassium |
| kg | kilogram |
| LDH/LH | lactic dehydrogenase |
| LDLChol | low density lipoprotein cholesterol |
| LFTs | liver function tests |
| LH | luteinising hormone |
| LMP | first day of last menstrual period |
| LSCS | lower segment Caesarean section |
| LUTS | lower urinary tract symptoms |
| m | metre |
| mane | in the morning |
| MCS | microscopy, culture and sensitivity |
| MCV | mean cell volume |
| mg | milligram |
| MRI | magnetic resonance imaging |
| MSU | midstream urine |
| MVA | motor vehicle accident |
| Na | sodium |
| NAAT | nucleic acid amplification test |
| NAD | no abnormality detected |
| NH&MRC | National Health and Medical Research Council |
| NIDDM | non-insulin dependent diabetes mellitus |
| nocte | at night |

| | |
|---|---|
| NRT | nicotine replacement therapy |
| NSAIDs | non-steroidal anti-inflammatory drugs |
| OA | osteoarthritis |
| OCP | oral contraceptive pill |
| ocp | ova, cysts and parasites |
| od | once a day |
| OTC | over the counter—medication bought from a pharmacy without a prescription |
| Pap | Papanicolaou |
| PCR | polymerase chain reaction |
| PEFR | peak expiratory flow rate |
| PMH | past medical history |
| PND | paroxysmal nocturnal dyspnoea |
| PR | per rectum |
| prn | as and when needed (*pro re nata*) |
| Prot | protein |
| PSA | prostate specific antigen |
| qds | four times a day (*quater die sumendus*) |
| RACGP | Royal Australian College of General Practitioners |
| RDW | red cell distribution width |
| RPR | rapid plasma regain test for syphilis |
| RR | relative risk |
| SLR | straight leg raising |
| SOB | shortness of breath |
| SSRI | selective serotonin reuptake inhibitor |
| STI | sexually transmitted infection |
| SVD | spontaneous vaginal delivery |
| TB | tuberculosis |
| TCA | tricyclic antidepressant |
| tds | three times a day (*ter die sumendus*) |
| temp | temperature |
| TFTs | thyroid function tests |
| TIA | transient ischaemic attack |
| TMJ | temporomandibular joint |
| TSH | thyroid stimulating hormone |
| TURP | transurethral resection of prostate |
| UEC | urea, electrolytes and creatinine |
| WHO | World Health Organization |
| WONCA | World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians aka World Organization of Family Doctors |



# How to use this book

This book is designed to help medical students and doctors practise clinical cases likely to be seen by Australian general practitioners. Each case consists of instructions for the doctor and role-playing patient and a suggested approach, a case commentary, references and recommended further reading. The cases are written in note form as is usual practice in clinical records.

This chapter is based on my experience of facilitating case-based learning groups for medical students, general practice registrars and international medical graduates. I found out by trial and error what worked and what did not. But everyone is different: if you find a new way of practising please let me know.

## Don't read this book!

You will learn more by using this book rather than reading it from cover to cover. Come to each case fresh, so that you can test your knowledge and skills in general practice, and identify your learning needs. If you read through the book when you practise cases you will distract yourself with trying to remember the suggested approach. This would test your recall rather than the application of your knowledge and clinical skills to a particular context.

## Do read the instructions

The easiest way to fail a clinical exam is to ignore the instructions as marks are pre-allocated according to the instructions. Time management is crucial to ensure you cover the requirements. For example, you need to take a 'good enough', safe history before moving on to the clinical examination and planning management, if all three elements are requested in the scenario. Taking eight minutes to do a complete history will lead to a fail if the examination and management are omitted.

## Find a group

Most people find it is easier to study with a group rather than in isolation. A group motivates you to persevere and learning from your mistakes in a safe environment is far better than learning from patients.

If you are in isolated practice you can still join a group. I have run practice consultation groups over the phone. It presents some challenges but can be done. Video-conferencing or webcams are other options. I do not know of any technology for remote physical examination, but all other aspects of the consultation can be practised. If you have not been observed conducting physical examinations you could videorecord consultations with patients (with their written consent), friends or relatives. Send copies to your group and ask them for constructive feedback.

Set a regular time to meet. Initially I ran groups in the evenings but found I was too tired to teach and colleagues were too tired to learn. Saturday afternoon can work well and allows for morning surgeries or even a lie-in; another group met over Sunday brunch.

Groups work better if group rules have been agreed to. The group needs to develop trust so that ignorance can lead to learning rather than embarrassment. Confidentiality is an important issue. Participants will learn more if learning is derived from and related to their own clinical practice, so everyone needs to know that they can safely share their experiences.

## Allocate roles

Allocate the roles to the role-players ahead of the session if possible. This lets the role-players familiarise themselves with the scenario and search out more information about the clinical problem, which adds to their learning. Props can help role-players give a more authentic look and mimic the sorts of clues that prompt GPs in clinical practice.

These scenarios are about common problems; at some stage one of the scenarios could be about a condition that the role-player, or a friend or relative, suffers from. This may enhance their performance but equally it could create a tense situation. By allocating roles in advance, the role-player can decline the case before major issues develop.

## Observers

Observers of the role-play will learn more if they see only the 'Instructions for the doctor'. Encourage observers to make notes on how they would approach the case, which helps them to be active learners rather than passive observers. They can also give constructive feedback to the role-playing doctor and patient.

## Facilitator

One person can facilitate the case and have access to all the information. The checklists are designed for the facilitator to tick off as the doctor deals with a particular aspect of the case.

Please give the doctor the examination findings only on specific request. Doctors should demonstrate their reasoning by asking for the findings that will confirm or refute the diagnosis. For example 'what are the neurological findings' is too broad a question to ask about a patient with a suspected stroke. Instead questions should be asked about the expected changes in tone, power, sensation, coordination and reflexes in the affected limbs.

## Timing

Allocate a timekeeper for each scenario. Students and junior general practice registrars may decide to use the material without a time limit but more experienced doctors should complete the short cases in eight minutes and the long cases in nineteen minutes, following three minutes to read through the case scenario.

Allow time for discussion after each scenario: usually twenty minutes for short cases and thirty minutes for long cases is adequate.

## Room setup

Set up the room like a consulting room, with chairs for the patient and doctor, a desk, examination couch and standard consultation equipment. The patient should be sitting on the chair at the beginning of the consultation even if they will need to be examined. It gives too big a clue if the doctor walks in and finds the patient dressed ready for a physical examination! Role-playing patients may prefer to wear bathers or shorts under their clothes to ease their potential embarrassment at being examined BUT remember that this is about learning, not humiliation. If the patient role-player does not wish to be examined, please accommodate this.

In physical examination cases you should demonstrate in a deliberate way that you are performing the examination correctly. Talking yourself through the examination, making a running commentary of your actions, can increase your awareness of what you are doing and why, and demonstrate your clinical reasoning to observers.

## Doctors training in the Australian College of Rural and Remote Medicine pathway

One component of the Australian College of Rural and Remote Medicine (ACRRM) assessment is 'StAMPS': structured assessment using multiple patient scenarios. This is an examination via video-conference where each scenario lasts for ten minutes. Doctors are asked questions in a viva or role-play format. Physical examination and practical skills are assessed separately from StAMPS.

The cases in this book were primarily designed for doctors preparing for the Royal Australian College of General Practitioners (RACGP) Clinical Examination but doctors preparing for the ACRRM Fellowship may find them a useful resource to practise via video-conference or webcam (see Introduction on page xxiii).

## Suggested approach

The suggested approach to each case includes the essential elements of medical consultations as outlined in the Kalamazoo Consensus Statement[1] but does not exhaust all the possibilities. When you are reading this section you will probably think of your own additions, but for each addition you need to remove an item to avoid the cases becoming impossibly long for the time available. You will find that additions are easy but taking something out is not; discuss these issues with your group—the process of considering what to do in each case greatly improves your clinical reasoning. If your group does agree on a significant addition, please let me know.

Mnemonics pose a particular risk. They help us to remember what to ask but are best used as a framework for a conversation. Too often a doctor is working hard to remember the mnemonic rather than focusing on the patient's response to the questions. While this is understandable we must be more than questionnaires on legs! Listening and responding to answers matters just as much as asking the right questions.

## Case commentary

There is a commentary on the relevant issues in each case as well as references and suggestions for further reading.

## Let the show go on

Doctors will learn more from the scenario if it runs for the allotted eight or nineteen minutes. However, maintaining someone's self-esteem may be

more important. The response to a doctor getting stuck or suffering from stage fright mid-consultation will depend on their level of experience. For doctors early in training, you can ask for volunteers to take over the consultation. For more experienced doctors, the facilitator can make suggestions such as, 'Try reading through the scenario again; it might prompt you on how to proceed,' or 'If this happened in your surgery, what would you do?'

This gives the doctor a framework for what to do if they get stuck in either an exam situation or in clinical practice.

If the role-playing patient is disturbed or upset, the scenario may need to be stopped.

## Guidelines for giving constructive feedback

Giving feedback constructively is a skill that will be useful for all general practitioners. Confidence can quickly evaporate in someone who has done badly in a scenario and it helps to have guidelines to avoid feedback being perceived as judgmental and destructive. It may feel contrived but it is safe. Once the group has grown and is learning well together you can focus more quickly on the aspects for improvement.

### Pendleton's rules on giving feedback

- Briefly clarify matters of fact
- The doctor says what was done well, and how
- The rest of the group says what was done well, and how
- The doctor says what could be done differently, and how
- The rest of the group says what could be done differently, and how.

I follow Pendleton's rules and ask the doctor to start the discussion by outlining what they did well.[2] Doctors invariably focus on their mistakes and fail to notice what worked well. I have waited on occasion for several minutes for some doctors to say just one good thing about their consultations. This is important, so that learning builds on what is already good and gives practitioners a realistic framework for self-reflection throughout their career.

Once the positives have been recognised I ask the doctor to outline what they might do differently if they had another chance. This gives me insight into their perceptions of their performance, and allows them to self-correct before group members comment. I know that I am facing a major teaching challenge when someone is unaware that they have performed poorly.

If there is time and the doctor has noticed an error, you can re-run the role-play and allow them to practise their new learning. Once they have shared their ideas on how to improve their consultations, the observers can join in.

Again, it is a good principle to ensure that feedback is balanced. *Descriptive* feedback should reduce defensiveness and promote learning. It is:[3]

- non-judgmental
- specific
- directed towards behaviour rather than personality
- checked with the recipient
- outcome-based
- problem-solving
- in the form of suggestions rather than prescriptive comments.

Let me give you an example. You have just watched a colleague's consultation. During the consultation the doctor wrote a script for an anti-hypertensive, asking the patient about her exercise regime at the same time. You observed the patient go red in the face and mumble an answer. The doctor did not raise the issue of exercise again and did not notice the patient blush.

*Judgmental* feedback might be something like this:

Facilitator: 'You missed your chance to hear about her exercise. It is bad practice to ask questions while you are writing scripts. You'll never make a decent doctor. Don't they teach you anything at medical school?'

The alternative *descriptive* feedback might be:

Facilitator: 'Well done for asking about exercise. She did not say very much. Why do you think that might be?'

Doctor: 'Maybe she was embarrassed because she does so little. Why do you ask?'

Facilitator: 'I noticed that you asked about exercise while you were writing the script. When you asked the question she blushed and looked embarrassed and mumbled an answer. What do you think that was about?'

Doctor: 'I guess asking about exercise is a delicate issue. Maybe I gave the impression that I wasn't interested in the answer when I asked her at the same time as writing the script. No wonder she didn't say much. In future I'll try to give patients my full attention when I ask important questions.'

Facilitator: 'Would you like to re-run the scenario?'

## Reluctant participants

Role-play has an established place in facilitating learning in general practice and in assessing the competency of practitioners in Australia.[4] However, many students and doctors are reluctant to participate. This is understandable. Consulting is central to our effectiveness as practitioners but it is also very personal.

International medical schools may have different approaches to teaching consultation skills. Several doctors that I have taught had not been observed consulting during their training. When they moved to Australia they found this method of learning new and frightening—an added challenge was consulting in English. My tip for this situation is to suggest that international medical graduates come to groups and just watch at first. When they are more familiar with the process they may be prepared to role-play as patients. Once confident in this, they can be invited to play the doctor.

## Have fun

Lastly, do enjoy your practice sessions. This is NOT about ritual humiliation. I learn something new each session about clinical practice, which improves the quality of care I give as a GP and increases my interest in the profession.

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# Introduction

The aim of this book is to help you prepare for Australian general practice exams using clinical case role-plays. This second enlarged edition contains twenty-five new cases covering topics such as osteoporosis, sleep apnoea and monitoring the use of warfarin. Such areas have become an increasing part of a GP's life. Two cases on emergency care are included and each case from the previous edition has been revised. The immunisation status in several cases has been simplified to 'up to date' to allow for regional and future variations in the immunisation schedule.

General practice activity data[1] indicate that general practitioners' work has become increasingly complicated: patients have multiple co-morbidities and are prescribed more drugs. My impression is that more research information can counter-intuitively create less certainty. GPs spend more time assessing patients' personal risk–benefit of any particular intervention. Screening for prostate cancer and hormone replacement therapy are prime examples of where there is a high risk of iatrogenic disease. The GP needs to be an expert in reading patients' personalities and fears, as well as scientific data. The cases in this book test the skill of taking a holistic approach to managing uncertainty in a complex context.

Most doctors find the time restrictions of the exam difficult. Three minutes is not long to read a patients' notes but may be longer than many doctors take to do this in clinical practice. Likewise, dealing with a problem in eight minutes challenges some candidates, while others expertly breeze through with time to spare to include opportunistic health promotion, confirming that the examiners do not ask the impossible. Cases should be quicker than in real life as the 'patient' knows in advance the answers to the important questions and candidates are not required to make clear, contemporaneous written notes.

## Definitions of general practice

Before you take a general practice exam you need to have a clear understanding of general practice. Let's look at some definitions of general practice (also called family practice in some countries).

The Royal Australian College of General Practitioners (RACGP) says:[2]

> General practice is part of the Australian health care system and operates predominantly through private medical practices, which provide universal unreferred access to whole person medical

> care for individuals, families and communities. General practice care means comprehensive, coordinated and continuing medical care drawing on biomedical, psychological, social and environmental understandings of health.

The World Organization of Family Doctors (WONCA Europe) defines the competencies and characteristics of general practitioners as:[3]

- normally the point of first medical contact within the health care system, providing open and unlimited access to its users, dealing with all health problems regardless of the age, sex or any other characteristic of the person concerned
- making efficient use of health care resources through coordinating care, working with other professionals in the primary care setting and by managing the interface with other specialties, taking an advocacy role for the patient when needed
- developing a person-centred approach, orientated to the individual, his/her family and their community
- having a unique consultation process, which establishes a relationship over time through effective communication between doctor and patient
- being responsible for the provision of longitudinal continuity of care as determined by the needs of the patient
- having a specific decision making process determined by the prevalence and incidence of illness in the community
- managing simultaneously both acute and chronic health problems of individual patients
- managing illness which presents in an undifferentiated way at an early stage in its development, which may require urgent intervention
- promoting health and wellbeing both by appropriate and effective intervention
- having a specific responsibility for the health of the community
- dealing with health problems in their physical, psychological, social, cultural and existential dimensions.

Doctors working in rural and remote Australia can face clinical situations that require skills in a wider scope of practice. Doctors can now choose to qualify as a general practitioner via the Australian College of Rural and Remote Medicine (ACRRM) Fellowship examination. ACRRM expects Fellows to be performing all the functions of a GP listed by RACGP and WONCA plus:[4]

> … responding to emergencies including stabilisation and definitive management as appropriate; providing hospital-based secondary care where required; delivering obstetric care; and undertaking a range of population health interventions at the practice and community level.

Those planning to sit the ACRRM exam may still find the cases useful by thinking through what they would do in each case if the nearest hospital or referral centre was more than an hour's flight away, or they were the only doctor in town running both a general practice and a small hospital.

The above definitions demonstrate the breadth of the general practice specialty and remind me why it is such an interesting profession. The illnesses we see are common but we are also alert for potentially serious conditions. For this we need a system of diagnosis that differentiates the headache caused by a brain tumour from a tension headache or a hangover and, if it is a tension headache, we need ways of exploring possible causes of the tension and discussing with the patient how to manage them.

## Consultation frameworks

The traditional consultation framework comprises history, examination, investigation, diagnosis, treatment and follow-up. While suitable for emergency care, this model is inadequate for the complexity of general practice.

I recommend the following texts that suggest some task-based and some process-based consultation frameworks:

- Pendleton, D, Schofield, T & Tate, P et al. 2003, *The new consultation: developing doctor–patient communication*, Oxford University Press, Oxford.
- Neighbour, R 2004, *The inner consultation: how to develop an effective and intuitive consulting style*, 2nd edn, Radcliffe Publishing, Oxford.
- Stewart, M, Brown, JB & Weston, WW et al. 2003, *Patient-centred medicine: transforming the clinical method*, 2nd edn, Radcliffe Publishing, Oxford.

In 2001 a meeting of medical educators and communication skills experts reached a consensus on the essential elements of communication in medical encounters (Kalamazoo Consensus Statement).[5] In this book I have adopted the elements of their suggested approach to cases, summarised as:

- Build the doctor–patient relationship
- Open the discussion
- Gather information
- Understand the patient's perspective
- Share information
- Reach agreement on problems and plans
- Provide closure.

## General practice exams

General practice exams need to ensure that, to be effective, GPs have the appropriate attitude as well as a broad range of knowledge and skills. So prepare to be tested on any of the characteristics outlined in the above definitions. Reading a textbook on clinical medicine is not enough. You have to apply the textbook knowledge to a particular person in their particular context, making the best use of the resources available.

One way to do this is to consider the domains of general practice. The RACGP domains are:[6]

1. Communication skills and the doctor–patient relationship
2. Applied professional knowledge and skills
3. Population health and the context of care
4. Professional and ethical roles
5. Organisational and legal dimensions.

The ACRRM domains are:

1. Core clinical knowledge and skills
2. Extended clinical practice
3. Emergency care
4. Population health
5. Aboriginal and Torres Strait Islander health
6. Professional, legal and ethical practice
7. Rural and remote contexts.

## Applying the domains to a particular situation

Imagine that you have just completed your reading on diabetes. You are now up to date with the latest research and the signs of early diabetic retinopathy. How will you apply this as a GP?

### *RACGP domain 1. Communication skills and the doctor–patient relationship*

Domain 1 reminds you that diabetes affects a person. In consultations you will focus on the patient and their experience of life with diabetes. You will communicate clearly in terms they understand and that are free of medical jargon.

A trap for doctors, particularly those from non-English speaking backgrounds, is to assume that patients whose first language is English understand all English. This is a myth: it is said that first-year medical students learn more new words than first-year language students. We need to constantly

distinguish between medical English and colloquial Australian English, and use each when appropriate. Watch a few Australian soap operas or reality TV shows to brush up on colloquial Australian English!

Domain 1 also includes health promotion, so discuss immunisations, smoking, alcohol and maintaining health, as well as the illness of diabetes, with your patient.

*RACGP domain 2. Applied professional knowledge and skills*
This is the most familiar domain, in which you ensure your patient has good diabetic control and you work to prevent complications.

*RACGP domain 3. Population health and the context of general practice*
'Population health' requires you as a GP to broaden your thinking beyond your patient to encompass the wider community. What is your role in preventing or screening for diabetes? Is there a group of patients with an increased risk of diabetes—Torres Strait Islander people, for instance—who need culturally appropriate screening?

'The context of general practice' includes consideration of your patient's life circumstances. Can they get fresh fruit and vegetables easily? What exercise can they safely do? Does their family or religious background influence their health? For example, how would you advise a Muslim diabetic on hypoglycaemics to cope during Ramadan?

*RACGP domain 4. Professional and ethical role*
Your role as a GP requires you to look at the standard of care that you provide for diabetics. Use clinical audit to check that you are following the national guidelines. Consider how your care integrates with the rest of the health care system: what are your links with the local optometrist who could screen your patients for diabetic retinopathy? Are you making the best use of resources? Could a practice nurse do routine diabetic care so that you can focus on complex cases?

Your ethical role might include such dilemmas as a case where a diabetic patient whose livelihood depends on holding a commercial driving licence also requires insulin.

*RACGP domain 5. Organisational and legal dimensions*
Are you using information technology to improve the quality of care for your diabetic patients? What are the recall systems? How do you ensure patient confidentiality when they attend for repeat prescriptions? When did you last calibrate your glucometer and sphygmomanometer? Do you make comprehensive and comprehensible notes? Is yours an accredited practice eligible for Service Incentive Payments?

*ACRRM domains. Emergency care, rural and remote context and Aboriginal and Torres Strait Islander health*
For diabetes this may mean managing diabetic ketoacidosis in a small rural hospital, starting newly diagnosed diabetic children on insulin or running a screening program at a football carnival in a remote Aboriginal community.

## Long and short cases

In this book, long cases usually test a whole consultation. Short cases usually test some part of a consultation, perhaps focusing on taking a history, performing a physical examination, giving a diagnosis or negotiating management. This challenges doctors who are used to conducting full consultations.

In cases that require management only, both students and doctors often still begin with a history and examination. This is a normal (and good) clinical response but it wastes precious time because it isn't required here. Several cases in this book give you practice at picking up the consultation halfway through.

We GPs would never finish our day's work if we took a full history and performed a complete examination on every patient. We take appropriate short cuts and take focused histories, examining the patient for specific information to rule a diagnosis in or out. Our expertise 'is the ability to access knowledge and make connections across seemingly disparate fields and life experiences'.[7]

The art of exams is to demonstrate this expertise. Medical students can eventually reach the answer but only experienced clinicians can connect the disparate elements of a scenario into a diagnostic approach in the time available. This 'elaborated knowledge' is essential for an independent general practitioner.[8]

Here is an example: what diagnosis comes to mind when you read 'headache', 'fever', 'rash'? The safe, experienced GP asks, 'Is this meningitis?' The clinical encounter will focus on excluding meningitis by a short, focused history and an immediate look at the rash. If it is purpuric they would exclude an allergy, give parenteral antibiotics and arrange immediate hospital admission. By contrast, a student might approach this case using a systematic, hypothetico-deductive method,[9] first taking a detailed history of the presenting symptoms, then a review of current medication and allergies, followed by a social history, family history, systems review and finally conducting a top-to-toe clinical examination. Once all the data is gathered the student will begin to piece together a possible hypothesis or diagnosis and deduce

the most likely diagnosis from the evidence available, or perhaps decide that further information is needed. By this time the experienced GP will have given the patient antibiotics. In this extreme example, the speed of the GP's diagnosis may be life-saving. This is rare in clinical practice but it illustrates the efficiency of pattern recognition as a diagnostic process. There is no short cut to this. It requires considerable study and experience and underlines the need for GPs to undergo supervised clinical practice.

## Summary

Clinical practice is still the best preparation for general practice and general practice exams. My hope is that this book will supplement your clinical work so that during exams you can demonstrate that you have the knowledge, skills and attitudes necessary for general practice in Australia.

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# Section 1 Adolescent health
# Case 1 Erin Campbell

## Instructions for the doctor

This is a short case.

Please take a history from Erin, examine her face only, then outline the most likely diagnosis and negotiate a management plan with her.

**Scenario**

Erin Campbell is a 14-year-old girl who presents to you with moderate facial acne. Her mum has come with her to the surgery but lets Erin see you on her own.

The following information is on her summary sheet:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Lives with parents.

# Instructions for the patient Erin Campbell

You are 14 years old and attend the local high school. Your zits dominate your life. Each morning your mum shouts at you to get dressed and ready for school while you stare at your zits in the mirror. You are convinced that you will never have a boyfriend like all your other friends. You used to take comfort in eating chocolate and cheese but have stopped since a friend said that was causing your zits.

You are embarrassed to be going to see the GP and hope the doctor will be kind.

The following information is on your summary sheet:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Lives with Mum.

# Suggested approach to the case

Establish rapport with Erin

Open-ended questions to explore Erin's concerns and expectations about her acne.

## Specific questions

Duration of acne

Location of acne

Impact of acne on social life and relationships

What has she tried so far as treatment?

What does she think causes the acne?

General health, e.g. are her periods regular?

Request permission to examine.

## Examination

Examine the face
—confirm acne
—describe signs: comedones, pustules, erythema or scarring.

## Management

Explain medical understanding of cause of acne without using jargon

Reassure that diet is not proven to change acne

Reassure that acne can be controlled, should not stop her socialising

Advise against picking or squeezing

Offer treatment depending on what Erin has already tried

Advise regular washing with soap

Avoid oily or greasy skin preparations

Treatment takes 4–8 weeks to be effective, can combine topical and oral treatments

*Reduce excess cells (hyperkeratinisation)*[1]
Topical retinoids, azelaic acid

*Reduce bacteria (propioniobacterium acnes)*

Benzoyl peroxide, strength according to skin type

Topical antibiotics (combine with Benzoyl peroxide to reduce antibiotic resistance)[2]

Oral antibiotics—tetracyclines not recommended until bone and teeth development complete

*Rebalance hormones (reduce androgen excess)*

Oral contraceptives containing an anti-androgen, such as cyproterone with ethinyloestradiol

*Reduce sebum hypersecretion*

Oral isotretinoin—high risk of teratogenicity

Arrange follow-up.

## Case commentary

Adolescent acne is a common problem and can lead to physical and psychological scarring.[3] Refer to Figure 1, centre insert page A.[4] Myths about its cause abound but the doctor can reassure Erin that the acne is not her fault and is not related to junk food. However, there are other good reasons to encourage a healthy diet.

Typically many treatments will have been tried at home prior to consulting a GP. It is important to find out what Erin has tried so you are offering something new rather than a treatment that has already been tried and failed.

For some teenagers, the hidden agenda of an acne presentation is a request for contraception. This requires sensitive exploration. A phrase that I find useful is: 'Some people who come to see me know that the contraceptive pill helps with their skin; is this the case with you?' The question about Erin's periods is to assess the likelihood of polycystic ovarian syndrome.

## Common pitfalls

Teenagers determine the severity and impact of their acne, not doctors. This case tests the doctor's ability to practise in a patient-centred framework. Low marks will be given to doctors who dismiss Erin as having a few pimples which are insignificant and which she should learn to live with.

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# Case 2 Amanda Porter

## Instructions for the doctor

This is a short case.

Please take a history from Amanda and then negotiate management with her. Your management plan will include explaining the need for a physical examination.

**Scenario**

Amanda Porter is a 16-year-old girl who has been coming to the practice for a long time. Last week during a school trip her class teacher caught Amanda making herself sick after the evening meal. With Amanda's consent the teacher phoned to make this appointment.

The following information is on her summary sheet:

**Past medical history**
Greenstick fracture left radius aged 8

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Fully immunised

**Social history**
Lives with parents.

# Instructions for the patient Amanda Porter

Your family have always had 'big bones'. As a child you accepted the fact that your Mum and Dad were on the sidelines at sports day rather than entering in the parents' races. You are used to being part of a big family and shopping at the outsize stores. Whenever friends visit they can't finish the amount of food they are given.

About three months ago you had a really bad attack of gastroenteritis. You were amazed to find that you lost weight. Losing weight made you feel great.

You found that if you made yourself vomit just after the evening meal at home you could lose weight without having to diet. Although the vomiting is not pleasant it makes you feel good because your figure is better and you are getting attention from the boys at the youth club.

Last week during a school trip your class teacher caught you making yourself sick after the evening meal. Your teacher phoned to make this appointment with your consent. You are 1.67 m tall and weighed 95 kg three months ago, giving you a BMI of 34 kg/m$^2$. You now weigh 89 kg (BMI 29 kg/m$^2$).

You are very scared about seeing the GP.

The following information is on your summary sheet:

**Past medical history**
Greenstick fracture left radius aged 8

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Fully immunised

**Social history**
Lives with parents.

# Suggested approach to the case

Establish rapport

Confirm confidentiality assured—unless disclosure required by law

Sensitively explore Amanda's ideas, concerns and expectations re the consultation.

## Specific questions

Establish facts about the vomiting and weight loss

Exclude significant physical pathology
- —Energy and general health
- —Diet, appetite
- —Fever, cough, sputum
- —Nausea, vomiting, diarrhoea, bowel disturbance, abdominal pain, amenorrhoea
- —Thirst, polyuria

Explore symptoms of an eating disorder using the **SCOFF** questionnaire:[3]
- —Do you make yourself **S**ick because you feel uncomfortably full?
- —Do you worry you have lost **C**ontrol over how much you eat?
- —Have you recently lost more than **O**ne stone [approx 6.4 kg] in a three-month period?
- —Do you believe yourself to be **F**at when others say you are too thin?
- —Would you say **F**ood dominates your life?

Exercise regime

Drugs such as laxatives

Or **HEADSS**[1] screen:
- —**H** **H**ome situation
- —**E** **E**mployment, **E**ducation, **E**conomic situation
- —**A** **A**ctivities, **A**ffect, **A**mbition, **A**nxieties
- —**D** **D**rugs, **D**epression
- —**S** **S**exuality
- —**S** **S**uicide, **S**elf-esteem, **S**tress

Explain that a physical examination is needed.

## Most likely diagnosis

Explain most likely diagnosis—eating disorder not otherwise specified (EDNOS).

### Management

Explain reasons for concern about vomiting

Raise possibility of an eating disorder

Perform physical examination

Urinalysis

Assure of ongoing support and follow-up

Reassure that assistance is available.

## Case commentary

The aim of this case is for the doctor to develop a trusting relationship with Amanda and establish that she has an eating disorder. Sensitive questioning and active listening is needed to get Amanda to admit that she is making herself vomit. She does not meet the criteria for either anorexia or bulimia; however, the self-induced vomiting means she does have an eating disorder not otherwise specified (EDNOS).[1] Eating disorders affect 2–3% of people in Australia and are presenting earlier and in more boys than previously.[2]

The SCOFF questionnaire provides a framework for asking about food and its place in people's lives.[3] Appropriate management is a combination of the medical aspects, such as a physical examination and investigations, and the psychosocial aspects.[4] HEADSS[5] is another useful framework for conversation with adolescents.

A poor or inexperienced doctor will focus solely on the medical implications of EDNOS and not consider the person and their situation and the emotion surrounding the problem. Feedback to the teacher can only be given with Amanda's permission.

The doctor is not expected to give details of the proposed management in the time available, but should reassure Amanda that there are options for assistance which usually involve her family and a psychologist.[6,7]

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# Section 2 Aged care
# Case 3 Elsie Humphries

## Instructions for the doctor

This is a long case.

Please take a history from Mrs Humphries. Then ask the facilitator for the results of the physical examination. Discuss your management plan with Mrs Humphries.

### Alternative instructions

Medical students and junior doctors might learn more from this scenario if they are asked to conduct the physical examination and negotiate a management plan with Mrs Humphries without a time restriction.

**Scenario**

You are called to see Mrs Elsie Humphries, an 85-year-old lady, at home. Her family phoned for the visit because she has told them that she has had several falls recently. They run a business interstate and visit her twice a year. The family want reassurance that Mrs Humphries is safe.

The following information is on her summary sheet:

**Current medical problems**
Diverticular disease
Congestive heart failure
Atrial fibrillation (AF)

**Past medical history**
Burnt-out rheumatoid arthritis
First child 1945
Second child 1947

**Medication**
Warfarin as directed
Digoxin 0.625 mg od

Frusemide 20 mg od
Perindopril 5 mg od

**Allergies**
Nil

**Social history**
Widowed 1995
Husband was an Australian Football League coach
Non-smoker
Alcohol intake—2 standard drinks per week

**Immunisations**
Up to date.

# Instructions for the patient Elsie Humphries

You are a rural battler. You have survived several droughts and floods and had rheumatoid arthritis during middle life. You are determined not to let old age beat you. You have coped since you were widowed and while you do not enjoy getting old you are proud of managing despite having only your cat for company.

You gave up expecting your children to be of any help to you long ago. They visit for just long enough to ease their guilt and run back to the city. If the children had their way they would parcel you up and put you in a home. It has worried them that you have mentioned a couple of recent falls. The children have asked your doctor to make a home visit to check that you are still safe.

Your house is full of curios and memorabilia, which makes moving without tripping difficult. You have an alarm, which you carry round your neck.

## Clinical examination findings

You have cataracts and your toenails are so long you cannot wear shoes. You are wearing slippers and a headscarf to cover up the bruise on your left temple from a recent fall.

Your blood pressure is 140/90 mm Hg with no postural drop and your pulse is 72 and irregularly irregular. There is no evidence of congestive cardiac failure. You have some ulnar deviation of the fingers following your rheumatoid arthritis.

All other physical examination findings are within normal limits.

The following information is on your summary sheet:

**Current medical problems**
Diverticular disease
Congestive heart failure
Atrial fibrillation (AF)

**Past medical history**
Burnt-out rheumatoid arthritis
First child 1945
Second child 1947

**Medication**
Warfarin as directed

| | |
|---|---|
| Digoxin | 0.625 mg od |
| Frusemide | 20 mg od |
| Perindopril | 5 mg od |

**Allergies**
Nil

**Social history**
Widowed 1995
Husband was an Australian Football League coach
Non-smoker
Alcohol intake—2 standard drinks per week

**Immunisations**
Up to date.

# Information for the facilitator

## Clinical examination findings

Mrs Humphries has cataracts and her toenails are so long she cannot wear shoes. She is wearing slippers, and a headscarf to cover up the bruise on her left temple from a recent fall.

Her blood pressure is 140/90 mm Hg with no postural drop and her pulse is 72 and irregularly irregular. There is no evidence of congestive cardiac failure. She has some ulnar deviation of the fingers following her rheumatoid arthritis.

All other physical examination findings are within normal limits.

Mrs Humphries' house is full of curios and memorabilia, which makes moving without tripping difficult. She has an alarm, which she carries round her neck.

# Suggested approach to the case

Establish rapport

Open-ended questions to explore Mrs Humphries' ideas, concerns and expectations.

## Specific questions

Ask about the falls

- —Frequency of the falls
- —Timing of the falls
- —Mrs Humphries' ideas on the cause of the falls
- —Have any of the falls been witnessed?
- —Have any injuries been sustained?
- —Any history of fits, incontinence or loss of consciousness?

Obtain further history exploring possible causes of falls

- —Environment related/accommodation
- —Impaired sensory input
- —Drugs and alcohol
- —Locomotor disorders
- —Falls in cerebral perfusion—postural hypotension, syncope, uncontrolled atrial fibrillation
- —Epilepsy
- —Systemic illness, e.g. infection

Explore her response to the falls, how she sees her future

Social history—current support mechanisms

Request permission to examine.

## Examination

Ask the facilitator for specific examination findings or seek permission to examine

Assess the home

- Causes of falls—loose rugs, obstacles, poor lighting, footwear
- Safety items—personal alarm

Assess Mrs Humphries

- Temperature
- Inspect for evidence of injury such as multiple bruises of different ages
- Cardiovascular system
  - —Pulse, rate and rhythm
  - —BP standing and sitting
  - —Jugular venous pulse
  - —Heart sounds
  - —Carotid bruits
  - —Ankle oedema
- Respiratory system
  - —Respiratory rate
  - —Chest auscultation
- Neurological system
  - —Cognitive function
  - —Vision and hearing
  - —Tremor
  - —Weakness
  - —Proprioception and balance: Romberg's test
  - —Coordination
- Movements
  - —Walking
  - —Neck movements
- Mental health
  - —Depression
  - —Anxiety

- Miscellaneous
  —Thyroid
  —Toenails
  —Metabolic.

## Investigations

| | |
|---|---|
| FBC | ECG |
| UEC | 24 hr ECG |
| BSL | TFTs |
| LFTs | Exclude underlying urine infection—MSU for MCS |
| CT head | To exclude cerebral haemorrhage. |

## Management

Outline to Mrs Humphries that her cataracts and her toenails may be causing the falls

Explain treatment is available for both

Seek Mrs Humphries' consent for referral and treatment

Ophthalmologist for cataracts

Podiatrist for toenails

Drug therapy
—Monitor current therapy
—Consider risk–benefits of warfarin

Maintain activity and mobility.

Other options to consider will depend on the services available locally but could include: occupational therapy, physiotherapy, social services, volunteer services such as Meals on Wheels, trial of hip protectors, aged care assessment team, referral to a falls clinic.[1] The issues to include regarding home safety are:

—Current likelihood of fall—is she safe staying at home?
—Ability to feed, dress and bathe safely
—Clear passageways of curios and memorabilia
—Remove loose rugs
—Get frame/walking aid
—Telephone near bed
—Regular visitors

Arrange follow-up

Ask Mrs Humphries if she wishes you to discuss the outcome of the visit with her family.

## Case commentary

This is a common general practice scenario: an elderly, independent lady who is at risk of losing her independence. Assessing Mrs Humphries at home is key to determining her level of risk and seeing life from her perspective. This richer understanding of the person and their life, compared to the impression gleaned in a clinic room, provides a good foundation for discussing her ability to continue to live independently.

Doctors are expected to demonstrate a systematic approach to the problem of falls in the elderly, addressing the physical, psychological and social issues. The history should focus on the details of the falls and on identifying a potential cause together with a risk assessment of the likelihood of further falls and significant injury for Mrs Humphries. Mrs Humphries' perspective on the falls must be explored. Is she frightened and seeking residential care? Or would she prefer to stay at home despite the risks? Mrs Humphries' past history of rheumatoid arthritis is a risk factor for osteoporosis. Interventions can help elderly people to live safely and independently[2] and delay admission to hospital or nursing home-care. Evidence on falls prevention is mixed.[3,4]

In this case the examination reveals cataracts and long toenails. The facilitator will only mention this pathology if asked. These are treatable and the doctor can be optimistic that Mrs Humphries can maintain her independence once these issues are dealt with appropriately. Before the cataracts are treated, the doctor may need to offer short-term residential care. I have seen one doctor offer to cut the toenails that day.

Referral to allied health services through the enhanced primary care items can follow completion of a care plan.[5] Mrs Humphries might benefit from a home medicines review; it is imperative that her warfarin is reviewed—does the risk of warfarin therapy now outweigh its potential benefits?[6]

## Common pitfalls

This case requires the doctor to focus their questions and examination on the common causes of falls in the elderly. Doctors who take an overly-detailed history or examination will run out of time and not progress to discussing management with Mrs Humphries.

Mrs Humphries is the doctor's patient but the family have asked for the visit. It is important to involve her family in her care; however, her consent is needed before discussing the outcome of the visit with them.

There is a risk of either bowing to the relatives' pressure and arranging admission for Mrs Humphries or colluding with Mrs Humphries' denial of the issue and not taking action where it is needed.

# References


1. Beer, C 2006, 'Attitudes of GPs to medical management in a falls clinic service', *Australian Family Physician*, vol. 35, no. 12, pp. 1008–10.
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5. Monagle, S 2002, 'Reducing falls in community dwelling elderly. The role of GP care planning', *Australian Family Physician*, vol. 31, no. 12, pp. 1111–15.
6. National Prescribing Service 2009, 'Antiplatelet and anticoagulant therapy in stroke prevention', *Prescribing Practice Review for Primary Care*, vol. 44.



# Case 4 Flora McMillan

## Instructions for the doctor

This is a short case.

Please explain the test results to Flora and develop a management plan with Flora for the prevention of further osteoporotic fractures.

**Scenario**

In January of this year Flora McMillan, aged 73, fell on her left arm and sustained a Colles fracture. She recently had a bone densitometry scan done and the results are:

| Scan | BMD $g/cm^2$ | T score | Fracture risk | Z score | Peer relationship |
|---|---|---|---|---|---|
| Lumbar spine | 0.854 | −2.6 | Marked | −1.2 | Lowest quartile |
| Total femur (L) | 0.686 | −2.6 | Marked | −1.5 | Lowest quartile |
| T score—comparison with young normal adult | | | | | |
| Z score—comparison with aged matched controls | | | | | |

The following information is on her medical record:

**Past medical history**
Hyperlipidaemia

**Medication**
Simvastatin 40 mg od

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Father died of a myocardial infarction aged 45

**Social history**
Teacher, semi-retired
Non-smoker
Height 1.6 m
Weight 66 kg
BMI 26 kg/m$^2$.

# Instructions for the patient Flora McMillan

You are a 73-year-old teacher. You work part-time in the school library. In January of this year you tripped over whilst on a walking holiday and broke your left wrist. (You did not quite hear the name of the fracture—it sounded like a Collie fracture but you though Collies were dogs.)

You are now back at work. Your wrist is apparently healed but it feels stiff in the morning and aches after a long day of carrying books.

Your GP arranged a bone density scan. You are here to find out the results and want to hear about anything you can do to prevent further fractures.

The following information is on your medical records:

**Past medical history**
Hyperlipidaemia

**Medication**
Simvastatin 40 mg od

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Father died of a myocardial infarction aged 45

**Social history**
Teacher, semi-retired
Non-smoker
Height 1.6 m
Weight 66 kg
BMI 26 kg/$m^2$.

# Suggested approach to the case

Establish rapport

Check reason for attendance—to obtain results of bone density scan

Give results
- —Explain results in terms that Flora understands—scan demonstrates osteoporosis
- —Link osteoporosis with recent fracture
- —Explain risk of further fractures and need to prevent

Fracture and osteoporosis prevention
- —Preventing falls—regular exercises to maintain sense of balance and proprioception, appropriate footwear, safety at home, caution at night. (For higher risk patients, consider occupational therapy assessment, walking aids and hip protectors)
- —Exercise—30 to 60 minutes of moderate weight-bearing exercise 3–4 days per week
- —Review of medication that predispose to bone loss/falls, e.g. steroids, sleeping tablets, anti-hypertensives can cause postural drop
- —Avoid excess alcohol or caffeine. Don't start smoking

Bone strengthening
- —Calcium in diet—recommended amount of 1–1.5mg calcium per day, may need supplement if avoiding dairy foods because of hyperlipidaemia, advise re timing to ensure absorption
- —Vitamin D—assess sun exposure, consider measuring Vitamin D
- —Bisphosphonates, e.g. alendronate, advise re potential jaw problems and need to remain standing after taking it, available with government subsidy if T score is less than 3.0 or previous minimal trauma fracture
- —Strontium or raloxifene (a selective oestrogen-receptor modulator) are second-line drugs. HRT is no longer recommended for osteoporotic fracture prevention.

Plan follow-up
- —Recommend 3–4 weeks to review medication, reinforce lifestyle advice
- —Repeat bone density scan in 2 years.

## Case commentary

This case requires the GP to interpret Flora's bone density scan results and give her understandable, practical information about osteoporosis and preventing falls. The Z-score compares Flora's bone mineral density to that of other women of her age whereas the T-score compares Flora's bone mineral density to that of normal young women. The T-score relates more closely to fracture risk. A T-score less than -2.5 is consistent with the diagnosis of osteoporosis and each standard deviation reduction in bone density is associated with an approximate doubling of the risk of hip fracture.

Bisphosphonates are considered first-line therapy because of their proven value in reducing verterbral and non-vertebral fracture risk and longer term safety/risk data.[1-3] No study has directly compared bisphosphonates and strontium.[4] The recommended daily intake of calcium for women over 50 is 1300 mg/day. This requires at least three serves of dairy per day with one of these being calcium fortified.[5]

## Common pitfalls

There is a risk of seeing osteoporosis and fracture prevention purely in terms of medication. Drugs play an important role but are only one aspect of management. Simple advice about maintaining fitness and balance, safety at home, a healthy diet and adequate but not excessive sun exposure is also needed.[6] The challenge is to say this in a way that Flora does not feel patronised. She sees herself as a working teacher, not an old lady!

# References


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5. Sanders, KM, Nowson, CA & Kotowitz, MA et al. 2009, 'Calcium and bone health: position statement for the Australian and New Zealand Bone and Mineral Society, Osteoporosis Australia and the Endocrine Society of Australia', *Medical Journal of Australia*, vol. 190, no. 6, pp. 316–20.
6. Beer, C & Giles, E et al. 2005, 'Hip fracture: challenges in prevention and management', *Australian Family Physician*, vol. 34, no. 8, pp. 673–6.



# Case 5 Nell Worthington

## Instructions for the doctor

This is a short case.

Please take a history as if you were in clinical practice and then outline your plans to Mrs Worthington.

**Scenario**

Mrs Nell Worthington is an 80-year-old retired legal secretary. She has hypertension. She has just moved to your area to be nearer to her daughter. She has brought her summary sheet from her previous practice.

**Past medical history**
Hypertension diagnosed 2003
Osteoarthritis of neck and hips
Vaginal hysterectomy for prolapse 1985
Four children

**Medication**
Spironolactone 25 mg od
Ramipril 10 mg od
Potassium chloride 600 mg slow release 1 tab od

**Allergies**
Nil known

**Social history**
Widowed 1998

**Immunisations**
Up to date.

# Instructions for the patient Nell Worthington

You are an 80-year-old retired legal secretary. You have just moved to be nearer your daughter. Life has been hard since Vince, your husband, died in 1998. You are feeling lost as you try to establish your new life in this town. You had attended the same doctor back home for years and are nervous about coming here today.

You have been feeling lethargic recently but have put this down to the move. Your opening line will be, 'Doctor I'm feeling tired, but maybe this is because I have just moved here.'

The following information is on your summary sheet:

**Past medical history**
Hypertension diagnosed 2003
Osteoarthritis of neck and hips
Vaginal hysterectomy for prolapse 1985
Four children

**Medication**
Spironolactone 25 mg od
Ramipril 10 mg od
Potassium chloride 600 mg slow release 1 tab od

**Allergies**
Nil known

**Social history**
Widowed 1998

**Immunisations**
Up to date.

# Suggested approach to the case

Establish rapport

Welcome Nell to the practice
—Ask about the move, is she settling in?

Explore patient's ideas, concerns and expectations regarding this consultation.

## Specific questions

Enquire about current symptoms

Brief systems review—any problems with your breathing, your appetite, your bowels, your waterworks, sleep, energy level, weight changes?

Review information on summary sheet with Mrs Worthington

Confirm current medication

Explore other cardiac risk factors
—Exercise
—Smoking

Other preventive health measures
—Immunisation status
—Alcohol consumption

Full physical examination—needed, but not part of this consultation.

## Investigations

Explain need for investigations

Surgery tests: BSL or urine dipstick, ECG

Lab tests
—Arrange urgent UEC—drug regimen risks hyperkalaemia, can cause tiredness
—Non-urgent fasting lipids, BSL, FBC, LFTs, TFTs.

## Management

Cease potassium supplement and explain why

Arrange follow-up—how Mrs Worthington will get the results.

## Case commentary

The first consultation for a new patient at a practice provides a good opportunity for a thorough medical review. Mrs Worthington's drug regimen puts her at risk of hyperkalaemia and she needs urgent assessment of her electrolytes.

Mrs Worthington's lethargy could be due to the recent relocation but, given her age, it is important to exclude other pathology. Doctors are expected to deal with the immediate issue of potential hyperkalaemia and then make arrangements for further review. This prioritisation of 'what do I need to do today, what do I need to do in the next week, what do I need to do in the next month' is an important skill for doctors to learn and demonstrate. The cost of admission creates a tendency to do everything at once for hospitalised patients, but in general practice the best use of resources and the best way to help patients to change is to establish priorities and work through them systematically over time.

This case is based on a true story. The patient was admitted to hospital because of the hyperkalaemia—an entirely preventable admission. In Australia up to 30% of hospital admissions in patients over the age of 75 are medication related, of which three-quarters are probably preventable.[1]

## Common pitfalls

Doctors should avoid unfair criticism of the doctor who instigated Mrs Worthington's drug regimen. The ideal would be to discretely contact the prescriber and find out why this regimen was chosen, enabling the person to learn from the experience.[2–4]

# References


1. Runciman, WB, Ronghead, EE & Senple, S et al. 2003, 'Adverse drug events and medication errors in Australia', *International Journal for Quality in Health Care*, vol. 15, suppl 1, pp. i49–59.
2. Burgess, CL, Holman, CDAJ & Satti, AG 2005, 'Adverse drug reactions in older Australians, 1981–2002', *Medical Journal of Australia*, vol. 182, no. 6, pp. 267–70.
3. Hollander-Rodriguez, JC & Calvert, JF Jr 2006, 'Hyperkalemia', *American Family Physician*, vol. 73, no. 2, pp. 283–90.
4. Roughead, EE, Barratt, JD & Gilbert, AL 2004, 'Medication-related problems commonly occurring in an Australian community setting', *Pharmacoepidemiology & Drug Safety*, vol. 13, no. 2, pp. 83–7.



# Section 3 Cardiovascular system
# Case 6 Helen Berkovic

## Instructions for the doctor

This is a short case. Please negotiate a management plan with Helen.

**Scenario**

Helen Berkovic is a 53-year-old prison officer. You have just returned from leave and in your absence Helen has been seeing your locum. The locum has diagnosed essential hypertension as blood pressure readings have been over 180/110 on three different occasions.

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Father—on blood pressure medication

**Social history**
Smokes 10 cigarettes per day.

# Instructions for the patient Helen Berkovic

You are a 53-year-old prison officer. Your own GP has been on leave and you have been seeing the locum. The locum has diagnosed high blood pressure but you don't know what this means or what can be done about it. Your dad has been taking medication for his blood pressure for years.

You have now come to see your own doctor to plan what to do.

The following information is on your medical record:

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Father—on blood pressure medication

**Social history**
Smokes 10 cigarettes per day.

The locum conducted a physical examination that was normal. Your BMI is 27 kg/m$^2$. The CXR, ECG, FBC, UEC, LFTs, fasting blood glucose and fasting lipids were normal.

# Suggested approach to the case

## Management

Re-establish rapport

Confirm diagnosis of essential hypertension

Confirm with Helen that investigations and examination were normal

Explore Helen's understanding of hypertension and treatment.

## Treatment options

Non-pharmacological
- —Exercise
- —Weight loss
- —Salt reduction
- —Reduce alcohol intake
- —Potential life stressors—work

Need to discuss smoking and assess readiness to quit

Pharmacological
- —Start medication—an ACE inhibitor is most often prescribed now.

## Follow-up

Document BP and give card for patient to record readings

Add to recall system to recheck UEC and BP on treatment.



## Case commentary

This is a common general practice situation. The first aim of this case is to ensure that the doctor has the skill to take over management of a patient from a colleague.

Traditional medical training is for doctors to plan patient management after taking a history and conducting an examination themselves. The increase in team practice now requires doctors who can pick up a consultation at different stages of the process. Reading the patient's notes was considered 'cheating' prior to seeing patients as a medical student: now it is a prerequisite of every consultation. Scanning notes with an attitude of critical trust is needed.

The second aim is to ensure the doctor can think holistically about hypertension and cardiovascular risk rather than taking a narrow

pharmaco-therapeutic view. Helen needs tailored, practical assistance in smoking cessation and adopting a healthy lifestyle.

Helen meets the criteria for starting medication for her blood pressure. The most common first choice in Australia is an ACE inhibitor;[1] guidelines suggest that calcium-channel blockers are also first-line medication.[2] The Heart Foundation recommends thiazides[3] in those 65 or older.

Lastly, arrangements for ongoing monitoring and follow-up are needed.[4]

## References

1. Eastman, P 2008, 'Antihypertensive prescribing: a survey of general practice supervisors and registrars', *Australian Family Physician*, vol. 37, no. 11, pp. 969–71.
2. Therapeutic Guidelines 2008, *Cardiovascular*, Therapeutic Guidelines Ltd, Melbourne.
3. Heart Foundation 2008, *Guide to management of hypertension*, www.heartfoundation.org.au/Professional_Information/Clinical_Practice/Hypertension/Pages/default.aspx, accessed 22 June 2010.
4. Fahey, T, Schroeder, K & Ebrahim, S 2005, 'Educational and organisational interventions used to improve the management of hypertension in primary care: a systematic review', *British Journal of General Practice*, vol. 55, no. 520, pp. 875–82.



# Case 7 Dilip Patel

## Instructions for the doctor

This is a short case. Please respond appropriately to Dilip's questions.

**Scenario**

Dilip Patel is a 44-year-old plumber who lives in your rural town. Four weeks ago he had severe chest pain and was admitted to hospital with acute coronary syndrome. Tests confirmed myocardial infarction and triple vessel disease for which he had coronary artery bypass graft surgery (CABG) in a metropolitan tertiary hospital. Dilip is now on the following medication:

—Atorvastatin 80 mg od
—Glyceryl trinitrate spray prn
—Aspirin 100 mg od
—Clopidogrel 75 mg od
—Perindopril 5 mg od
—Metoprolol 50 mg od

**Past medical history**
Nil

**Allergies**
Nil

**Immunisations**
Nil recorded

**Family history**
Nil recorded

**Social history**
Plumber
Ex-smoker
Alcohol—nil.

# Instructions for the patient Dilip Patel

You are a 44-year-old plumber in a rural town. Four weeks ago you had severe chest pain and you were admitted as an emergency to the local hospital. You were told that you had had a heart attack. After lots of tests you had urgent bypass surgery in a big city hospital.

You are now back home. On discharge from the hospital you were given a long list of medications to take. You have never needed tablets before and keep forgetting to take them.

You are unsure what the tablets are for as you assumed the bypass surgery cured the problems. You have all the tablets with you in a shopping bag in case the GP asks you what you are taking. You have the following questions for the GP:

—Why do I need to take tablets when the operation fixed the problem?
—What does each tablet do?
—How long will I be on these tablets?
—Do they have any side effects?

You take:

—Atorvastatin 80 mg once per day
—Glyceryl trinitrate spray as required for chest pain
—Aspirin 100 mg once per day
—Clopidogrel 75 mg once per day
—Perindopril 5 mg once per day
—Metoprolol 50 mg once per day.

You are an ex-smoker and do not drink alcohol. You do no regular exercise. The following information is on your medical record at the local GP surgery you are attending today.

Once the GP has discussed your worries about the medication you will be interested to hear any other advice the GP offers. If the GP starts to give other advice before answering your concerns about the medication you will get quite cranky and irritable.

The following information is on your medical record:

**Past medical history**
Nil

**Allergies**
Nil

**Immunisations**
Nil recorded

**Family history**
Nil recorded

**Social history**
Plumber
Ex-smoker
Alcohol—nil.

## Suggested approach to the case

Establish rapport

Explore Dilip's understanding and concerns about his medication

Ask if there are any other queries today:

*Why do I need to take tablets when the operation fixed the problem?*
The operation has bypassed the blocked blood vessels or 'pipes'. You need to keep the new vessels or 'pipes' open and prevent blockages in any other of your blood vessels. This is best done with a healthy lifestyle and medication.

*What does each tablet do?*

- Atorvastatin 80 mg tablets help to stop fat build-up in the blood vessels along with a healthy diet that includes five pieces of vegetables and two fruit per day.
- Glyceryl trinitrate spray prn helps to open up the blood vessels to get more oxygen to the heart if you have any chest pain.
- Aspirin 100 mg od and Clopidogrel 75 mg od both 'thin' the blood. They reduce the risk of blood clots and another heart attack.
- Perindopril 5 mg od is an ACE inhibitor. It works on a chemical in the kidney that makes your blood pressure go up. An ACE inhibitor protects the kidneys and keeps your blood pressure down, which reduces the risk of another heart attack.
- Metoprolol is a beta-blocker. This blocks any excess adrenaline from damaging your heart and blood vessels by slowing your heart rate and lowering your blood pressure.

*How long will I be on these tablets?*
You will be able to stop the Clopidogrel a year after your surgery. Normally it is best for people to stay on the other medication. This will be reviewed at regular intervals.

*Do they have any side effects?*
All medications have potential side effects. If you are concerned if something might be a side effect either phone or come in for advice. The common ones are:

- Atorvastatin—muscle pains
- Glyceryl trinitrate spray prn—headaches, dizziness
- Aspirin—stomach pains (gastritis)
- Clopidogrel—bleeding, diarrhoea
- Perindopril—cough
- Metoprolol—tiredness, cold hands and feet, impotence.

If you have time, raise other common concerns—understanding of procedure done, return to driving (minimum 4 weeks post-CABG for private car), return to work, advice about sexual activity, mood disturbance post-heart attack.

### Summarise information

Surgery was needed to bypass the blocked blood vessels

Aim now to get fit and stay healthy by:

- Taking medication as prescribed
- Regular checkups—blood pressure, lipids
- Not smoking
- Graded increase in exercise
- Healthy diet—offer dietician referral

Offer to provide printed patient handout on any of these topics.

## Case commentary

Helping patients understand their medications and our rationale for prescribing them is an important aspect of general practice chronic disease management.[1]

Dilip is a plumber who spends his life fixing blocked pipes. He understands the principles of coronary artery bypass grafting well but needs to also understand the risk of reblockage and what can be done to prevent it.

The GP should be able to explain the role of each medication and its potential side effects in straightforward lay terms, as this will increase Dilip's chances of following the advice being given.[2] The GP will also need to discuss other cardiovascular risk factors such as exercise and smoking. Patients recovering from surgery have many concerns. Dilip firstly wants his questions answered about the drugs but will also be grateful to a GP who raises more sensitive issues, such as mood disorders and when it is safe to resume sexual intercourse.

## Common pitfalls

Dilip wants to be treated with respect. He needs more than just being told to take the tablets because 'the hospital said so'.

The GP may be tempted to criticise the hospital for not giving Dilip enough information about his medication. Experience suggests that patients remember less than half of what they are told. Factors that make this worse are fear, pain, recent anaesthesia and anxiety, all of which may



apply to Dilip. It's important to give him information politely and not to assume that the hospital made no effort. But if this is a consistent gap with a particular hospital unit it is worth phoning the consultant to let them know your observation and ask what systems are in place. If Dilip continues to be perplexed or uncertain about his medication, the GP can ask if he would like a Home Medicines Review with a pharmacist.

## References

1. Shakib, S & George, A 2003, 'Writing the prescription and informing the patient', *Australian Family Physician*, vol. 32, no. 9, pp. 702–4.
2. Stafford, L, Jackson, HJ & Berk, M et al. 2008, 'Illness beliefs about heart disease and adherence to secondary prevention regimens', *Psychosomatic Medicine*, vol. 70, no. 8, pp. 942–8.

## Further Reading

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Aroney, C, Aylward, P & Chew, DP et al. 2008, '2007 addendum to the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand Guidelines for the management of acute coronary syndromes 2006', *Medical Journal of Australia*, vol. 188, no. 5, pp. 302–3.

# Case 8 Jackie Maloney

## Instructions for the doctor

This is a short case.

Please take a history from Jackie. Ask for the results of a focused examination from the facilitator. Tell Jackie the most likely diagnosis and your management plan.

**Scenario**

Jackie Maloney is a 50-year-old taxi driver. She smokes 30 cigarettes a day. She has asked for an urgent appointment to see you today because she has noticed some pain in her chest when she lifts heavy suitcases or has to go up stairs.

**Past medical history**
Mechanical low back pain—recurrent
Hiatus hernia—gastro-oesophageal reflux disease

**Medication**
Omeprazole 40 mg od

**Allergies**
Nil

**Immunisations**
Nil known

**Family history**
Mother died of myocardial infarction aged 60

**Social history**
Taxi driver.

# Instructions for the patient Jackie Maloney

You are a 50-year-old taxi driver. You feel heaviness in your chest on exercise. The heaviness lasts for less than a minute if you stop what you are doing. You are worried that this heaviness comes from your heart. It has been getting worse and you have finally admitted that you need help. At the back of your mind is the fact that your mother died of a heart attack. You have not had any palpitations but when pressed admit that you have some shortness of breath at the same time as you get the chest pain.

The most likely diagnosis is angina.

The following information is on your medical record:

**Past medical history**
Mechanical low back pain—recurrent
Hiatus hernia—gastro-oesophageal reflux disease

**Medication**
Omeprazole 40 mg od

**Allergies**
Nil

**Immunisations**
Nil known

**Family history**
Mother died myocardial infarction aged 60

**Social history**
Taxi driver.

# Instructions for the facilitator

### Alternative scenario

An alternative scenario is for the doctor to be told that Jackie's history suggests angina. The doctor would still have to ask for the examination findings but the focus would become negotiation of a management plan.

### Clinical examination findings

Looks well

No cyanosis

Height 1.65 m

Weight 87 kg

BMI 32 kg/m$^2$

Blood pressure 130/80 mm Hg

Pulse 72

Apex beat not displaced

Heart sounds normal, no added sounds

Chest clear

Peripheral pulses present, no oedema.

# Suggested approach to the case

Establish rapport

Open questions to explore patient's ideas, concerns and expectations.

### Specific questions

Detail about the heaviness/pain

Shortness of breath

Palpitations

Cough
—Relieving factors

Assess cardiac risk factors
- —Smoking
- —Diabetes
- —Hypertension
- —Hyperlipidaemia
- —Family history
- —Exercise

Request permission to examine.

## Examination

Looks well

No cyanosis

Height 1.65 m

Weight 87 kg

BMI 32 kg/m$^2$

Blood pressure 130/80 mm Hg

Pulse 72

Apex beat not displaced

Heart sounds normal, no added sounds

Chest clear

Peripheral pulses present no abnormalities found, no oedema.

## Most likely diagnosis

Angina—sensitive explanation without using medical jargon.

## Planned management

### Investigations

FBC, UEC, LFTs, Fasting blood glucose, lipids—fasting, ECG, (troponin*)

Urgent stress test, referral for angiography depending on response to medical treatment and stress test.

*See Case commentary opposite re troponin testing.

## Treatment

—GTN spray
—Aspirin low dose
—Beta-blocker or nitrate or long-acting calcium-channel blocker

Check emotional impact of possible diagnosis

Recommend urgent attendance at hospital/call ambulance if pain not settling at 10 minutes[1]

Check and discuss implication for driving

Ensure follow-up and offer health promotion (immunisations, check alcohol intake, advice re exercise).

## Case commentary

This is a case of angina. In the time available the doctor should be able to state angina as the most likely diagnosis. When this probable diagnosis is mentioned for the first time, a good doctor will watch carefully for Jackie's reaction and allow her to vent her feelings.

Knowing when to test troponin is difficult. It is indicated in suspected acute coronary syndrome (ACS)[2] but not in chronic stable angina.[3] Urgent hospital admission and assessment is the appropriate management of ACS, not troponin testing in the surgery. Jackie's symptoms don't meet the criteria for ACS and her angina is not yet stable, so it is reasonable to do a troponin test provided follow-up is in place, both to ensure the result arrives and is actioned urgently if indicated.

Aspirin is recommended in angina but caution is needed because of the past history of gastro-oesophageal reflux, and Jackie will need to be asked about recurrences of pain in follow-up.

Beta-blockers, nitrates and calcium channel blockers appear to be equally effective for symptom relief. If Jackie remains symptomatic treatments can be combined, except for beta-blockers + diltiazem or verpamil.[4]

A safety point is to consider the impact of angina on Jackie's work as a taxi driver. Doctors are not expected to remember the rules regarding angina and commercial vehicle drivers, but must be aware that this is an issue and tell the facilitator that they would check the regulations and advise Jackie accordingly. Jackie meets the standards for private driving but not the commercial standard. Jackie would need to be off work until a cardiologist assesses the severity of the angina.[5]

# References

1. Heart Foundation 2009, 'Will you recognise your heart attack?', www.heartattackfacts.org.au/Home.aspx, accessed 22 June 2010.
2. Aroney, CN, Aylward, P & Chew, DP et al. 2008, '2007 addendum to the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand guidelines for the management of acute coronary syndromes 2006', *Medical Journal of Australia*, vol. 188, no. 5, pp. 302–3.
3. Abrams, J 2005, 'Clinical practice. Chronic stable angina', *New England Journal of Medicine*, vol. 352, no. 24, pp. 2524–33.
4. Kelemen, MD 2006, 'Angina pectoris: evaluation in the office', *Medical Clinics of North America*, vol. 90, no. 3, pp. 391–416.
5. Austroads 2003, *Assessing fitness to drive*, www.austroads.com.au/aftd/index.html, accessed 22 June 2010.

# Case 9 Eric Schmidt

## Instructions for the doctor

This is a long case.

Please take a history and conduct an appropriate examination. Outline the most likely diagnosis and negotiate a management plan with Mr Schmidt.

**Scenario**

Mr Eric Schmidt is a retired farmer aged 76. He is used to hard physical work and is worried that he can no longer walk very far. He did not want to bother the doctor about it but finally let his daughter make an appointment when she saw him struggling at the weekend.

The following information is on his summary sheet:

**Past medical history**
Deep laceration to right arm from farm machinery 1964
Declined to attend recent men's health screening held at surgery

**Medication**
Nil recorded

**Allergies**
Nil recorded

**Immunisations**
Nil recorded

**Family history**
Father died of myocardial infarction aged 50
Mother died of 'old age'

**Social history**
Farmer
Married with two children.

# Instructions for the patient Eric Schmidt

You are a retired farmer aged 76. You are used to hard physical work and are worried because you can no longer walk very far. You did not want to bother the doctor about it but finally let your daughter make an appointment when she saw you struggling at the weekend.

You get a cramp-like pain in your right leg after walking a certain distance. Once you stop and rest for five minutes you can continue on further. Currently you can get to the first paddock, about 500 m, but then have to lean on the gate for a while until the pain in your leg goes away.

You do not have any nocturnal pain or any other symptoms of cardiovascular disease.

You roll your own cigarettes and get through about 20 a day. You drink two or three cans of beer at the weekend. You have considered giving up smoking and would like advice from the doctor on how to do this, particularly if the doctor thinks that this will improve your leg pain.

## Clinical examination findings

On examination, there are absent popliteal, posterior tibial and dorsalis pedis pulses on the right leg. There are no bruits.

The following information is on your medical record:

**Past medical history**
Deep laceration to right arm from farm machinery 1964
Did not attend recent men's health screening held at surgery

**Medication**
Nil recorded

**Allergies**
Nil recorded

**Immunisations**
Nil recorded
Family history
Father died of myocardial infarction aged 50
Mother died of 'old age'

**Social history**
Farmer
Married with two children.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Mr Schmidt's ideas, concerns and expectations.

### Specific questions

Establish claudication distance and how quickly pain eases with rest

Absence of pain at night or at rest

Check for other symptoms of cardiovascular disease—angina, TIAs, shortness of breath, fatigue

Effect of low temperature on symptoms

Impact of symptoms on function

Worsening of symptoms over recent time

Cardiovascular risk factors—smoking history and readiness to change

Past medical history

Family history

Medication, ask about over-the-counter medication, complementary or alternative medicines

Request permission to examine.

### Examination

Height, weight, body mass index

BP, pulse

Apex beat

Heart sounds

Signs of heart failure

Carotid bruits

Peripheral pulses

Skin

—Note colour, distribution of hair
—Postural colour change
—Capillary filling

Urinalysis—glycosuria, proteinuria.

### Most likely diagnosis

Intermittent claudication.

### Investigations

FBC

UÊC

Lipids—fasting with ratio

ECG

Fasting BSL

Exclude arteritis/thrombophlebitis—ESR or CRP

Doppler study of peripheral arteries—ankle-brachial pressure index.

### Management

'Keep walking, stop smoking'

Explain the pathophysiology of intermittent claudication and the rationale for exercise and giving up smoking

Offer practical advice on quitting smoking

Treat any dyslipidaemia, diabetes, hypertension

Start aspirin

Advise on urgent symptoms that would need early review: critical ischaemia (gangrene, rest pain, ulcers)

Plan follow-up including review of need for immunisations, particularly tetanus

Referral to vascular surgery if femoral pulses absent, critical ischaemia (urgent) or persistent symptoms despite medical treatment.

## Case commentary

Mr Schmidt gives a clear history and typical examination findings of a person with intermittent claudication. Doctors need to demonstrate that the leg is not critically ischaemic and measure the ankle-brachial pressure index (ABPI) to confirm peripheral arterial disease—an ABPI less than 0.9 is diagnostic.[1] The 'risk to the limb is low but the risk to life is high'[2] through other cardiovascular problems such as myocardial infarction or cerebrovascular disease. The focus of management should be on the reduction of cardiovascular risk by treating any dyslipidaemia, diabetes and hypertension and stopping smoking, regular walking and dietary modification.[3,4]

The doctor will need to explain the link between the current pain and cardiovascular risk factors and use motivational interviewing techniques to discuss smoking cessation.

Mr Schmidt has an occupational risk of tetanus but there is no information in the summary sheet about his immunisations. Good doctors will notice this and arrange a review of Mr Schmidt's immunisations at another appointment.

# References

1. Norman, PE, Eikelboom, JW & Hankey, GJ 2004, 'Peripheral arterial disease: prognostic significance and prevention of atherothrombotic complications', *Medical Journal of Australia*, vol. 181, no. 3, pp. 150–4.
2. Burns, P, Gough, S & Bradbury, A 2003, 'Management of peripheral arterial disease in primary care', *British Medical Journal*, vol. 326, pp. 584–8.
3. Sontheimer, DL 2006, 'Peripheral vascular disease: diagnosis and treatment', *American Family Physician*, vol. 73, no. 11, pp. 1971–6.
4. Department of Health and Ageing 2004, *Smoking cessation guidelines for Australian general practice handbook*, Commonwealth of Australia, Canberra.



# Case 10 Dorothy Smythe

## Instructions for the doctor

This is a long case.

Please take a history and conduct an appropriate examination. Outline the most likely diagnosis and negotiate a management plan with Mrs Smythe.

**Scenario**

Mrs Dorothy Smythe is an 85-year-old lady. For the last few weeks she has noticed increasing shortness of breath.

The following information is on her summary sheet:

**Past medical history**
Hypertension since 1960
Myocardial infarction 2001
Coronary artery bypass graft × 3 2001

**Medication**
Ramipril 10 mg od
Glyceryl trinitrate (GTN) spray prn
Simvastatin 20 mg od

**Allergies**
Nil

**Family history**
Father died of myocardial infarction aged 50
Mother died of 'old age'

**Social history**
Widowed 30 years ago
Four children
Lives with daughter
Non-smoker.

# Instructions for the patient Dorothy Smythe

You are a widow and live with your unmarried daughter. You had a heart attack years ago and had bypass surgery. Since then you have been reasonably well, taking the GTN spray only occasionally for angina.

Over the past few weeks you have become increasingly breathless and out of puff. Sometimes you wake up at night gasping for breath. You have noticed that your ankles have become more swollen and you now walk around the house wearing slippers.

You have come to see the doctor in the surgery to see what can be done.

The following information is on your medical record:

**Past medical history**
Hypertension since 1960
Myocardial infarction 2001
Coronary artery bypass graft × 3 2001

**Medication**
Ramipril 10 mg od
Glyceryl trinitrate (GTN) spray prn
Simvastatin 20 mg od

**Allergies**
Nil

**Family history**
Father died of myocardial infarction aged 50
Mother died of 'old age'

**Social history**
Widowed 30 years ago
Four children
Lives with daughter
Non-smoker.

**Clinical examination findings**
Please tell the doctor the following findings when they examine you:
Height 162 cm
Weight 80 kg—previous reading one year ago was 78 kg
BMI 30.5 kg/m$^2$
Temperature normal
Pulse 104 regular

Blood pressure 146/82 mm Hg
Respiratory rate 18 per minute
No cyanosis
JVP 5 cm
Inspection shows CABG scar
Apex beat displaced laterally to the anterior axillary line
Heart sounds—added third sound
Bilateral basal crepitations lungs
Hepatomegaly 3 cm, tender, smooth and firm
Pitting oedema to mid shins bilaterally.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Mrs Smythe's ideas, concerns and expectations.

### Specific questions

Shortness of breath, exercise tolerance

Ankle swelling

Chest pain

Paroxysmal nocturnal dyspnoea

Palpitations

Effect of symptoms on ability to function

Cough

Brief systems review

Review PMH, drugs, allergies and social situation including smoking history

Request permission to examine.

### Examination

Weight, height, BMI

Temperature

BP, pulse

Respiratory rate

Colour—exclude cyanosis

Heart
- —JVP
- —Inspection, note CABG scar
- —Palpation—apex beat
- —Auscultation

Chest
- —Percussion
- —Auscultation

Abdomen—check for hepatomegaly

Ankles
—Pulses
—Oedema.

## Most likely diagnosis

Congestive cardiac failure.

## Investigations

FBC

UEC

LFTs

Brain naturetic peptide—useful to exclude cardiac failure[1]

ECG to exclude new infarction

TFTs, fasting BSL, lipids, if not done within the last year

CXR

Echocardiography.

## Management

Explain congestive cardiac failure

Commence loop diuretic—urgent check of renal function and electrolyte levels

Advise about the side effects of change in medication

Aspirin low dose unless contraindicated

Treat any co-morbidities such as diabetes, hypertension

Beta-blockers can be initiated at low dose once condition is stabilised, unless contraindicated[2]

Advise on urgent symptoms to seek early review

Discuss social situation—does she need extra assistance, is she claiming all entitlements, is a social work referral needed?

Encourage regular exercise[3]

Check whether due for influenza or pneumococcal vaccination

Advise of follow-up arrangements.

## Case commentary

The most likely cause of Mrs Smythe's shortness of breath is congestive cardiac failure. The prevalence of chronic heart failure is over 50% in people over 85 years of age.[4] The doctor needs to take a history and conduct an examination that confirms this and excludes other possible common causes, such as anaemia or a respiratory problem. Once the diagnosis is confirmed the doctor can assess the severity of the shortness of breath and plan appropriate management.

The term 'heart failure' is alarming to many patients. The doctor will need to explain clearly what this means and that treatment aims to reduce symptoms and prevent disease progression.

This case gives the doctor the opportunity to promote multidisciplinary care.[5] For example, an exercise physiologist or physiotherapist might offer an exercise program or a social worker might ensure that Mrs Smythe fully accesses any entitlements to financial support. Referral to volunteer services or a day care centre may prevent Mrs Smythe's current illness becoming a reason for being isolated and housebound. Could a practice nurse be delegated to offer immunisations and take blood for follow-up tests? Mrs Smythe might not know of all these services so it is appropriate for the GP to let her know what is available and offer to facilitate these through the Medicare Team Care Arrangements.

# References


1. Doust, J, Lehman, R & Glasziou, P 2006, 'The role of BNP testing in heart failure', *American Family Physician*, vol. 74, no. 11, pp. 1893–8.
2. Jackowski, L & Azam, R 2008, 'Beta blockers in systolic heart failure', *Australian Family Physician*, vol. 37, no. 3, pp. 137–9.
3. Wise, FM 2007, 'Exercise based cardiac rehabilitation in chronic heart failure', *Australian Family Physician*, vol. 36, no. 12, pp. 1019–24.
4. Krum, H, Jelinek, MV & Stewart, S et al. 2006, 'Guidelines for the prevention, detection and management of people with chronic heart failure in Australia 2006', *Medical Journal of Australia*, vol. 185, no. 10, pp. 549–57.
5. Piterman, L, Zimmet, H & Krum, H et al. 2005, 'Chronic heart failure–optimising care in general practice', *Australian Family Physician*, vol. 34, no. 7, pp. 547–53.



# Section 4 Challenging consultation
# Case 11 Craig Kelly

## Instructions for the doctor

This is a short case.

Please take a history from Craig. Examination findings will be available from the facilitator. You are expected to tell Craig the most likely diagnosis and negotiate a management plan with him.

**Scenario**

Craig Kelly is a 19-year-old man. He has not previously been seen at the surgery.

Craig filled out a new patient questionnaire with the following information:

**Previous illnesses**
Kidney stones

**Current medication**
Nil regularly

**Allergies**
Nil

**Immunisations**
No idea

**Social history**
Smokes 10 cigarettes per day
Unemployed.

# Instructions for the patient Craig Kelly

Over the past few years you have become dependent on morphine capsules. It all started when you had a kidney stone and realised that the drug not only eased your physical pain but also blotted out other pains in your life. Your parents are now separated but when they were together they spent much time arguing and fighting and sometimes you got beaten up too.

You have been on various youth schemes but have never had a regular job. You moved to the city so that you could see lots of different doctors to get the morphine that you crave.

You have never tried other drugs but have sometimes wondered whether injecting would give you more of a hit than the capsules. You haven't considered giving up morphine because you can't see any better way of easing the pain in your life.

Today you are seeing this new doctor with the intention of saying that you had acute renal colic last night and that you need morphine to relieve the pain.

You say that the pain was right-sided and was severe enough to have you rolling around in agony. You had two pills left over from your previous prescription, which helped you get through the night but you now need some more. When asked, you have some haematuria but no other urinary symptoms.

You have no other relevant past medical history. You have filled out the new patient questionnaire as below:

**Previous illnesses**
Kidney stones

**Current medication**
Nil regularly

**Allergies**
Nil

**Immunisations**
No idea

**Social history**
Smokes 10 cigarettes per day
Unemployed.

## Information for the facilitator

Temperature 37°C

Pulse 88

BP 112/70 mm Hg

Abdominal examination normal

No signs of opiate use or withdrawal

Urinalysis normal.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Craig's ideas, concerns and expectations.

### Specific questions

About renal colic

- —Frequency, duration, site, radiation etc of pain
- —Severity of pain
- —What else has been tried?
- —Previous investigations
- —Urinary symptoms

Previous treating doctor.

### Ask for the examination findings

Temperature 37°C

Pulse 88

Blood pressure 112/70 mm Hg

Abdominal and renal angle examination

Urinalysis

Check for signs of opiate use or withdrawal: injection sites, pupil size, red eyes, runny nose.

### Management

Establish/suspect that patient is a drug seeker

Negotiate permission to speak to previous GPs, specialists

Ask whether Craig has ever injected drugs

Phone Prescription Shopper Information Service

Advise of local resources to assist with addiction

Mention contacting the State/Territory poisons branch or drug dependence unit

Manage any anger or other emotion in the consultation

Advise re needle exchange scheme if injecting mentioned

Demonstrate commitment to provide ongoing care if the patient wishes

Consider opportunistic health promotion about smoking, need for Hepatitis B and other immunisations.

## Case commentary

Craig is addicted to morphine and is seeking a script from the doctor. GPs need to be cautious when prescribing opiates and have a high index of suspicion that patients are drug seeking. Warning signs of patients seeking drugs are:

- Reception and appointment: new patient recently moved, walk-ins, last-minute appointments
- History: very knowledgeable about condition and drugs requested, requests drug by name, previous doctor 'unavailable', multiple allergies or reactions to non-addictive medications, carries letter from other doctors about opiate or benzodiazepine prescriptions with dubious rationale
- Examination: exaggerated appearance of pain, inconsistent behaviour and signs.[1]

Patients who are prescribed opiates either for pain or as part of a rehabilitation scheme (usually methadone) will carry documentation with them regarding their condition and should not be offended by probing questions from a GP. A wise GP will still check that the supporting letter is valid.



This case tests the doctor's skill at refusing a patient's request. A firm but polite no is needed. Other options for managing this case would be offering alternative analgesia or prescribing enough morphine capsules to last only the next 24 hours while you gather further information from his previous GP.



**Common pitfalls**

Inexperienced or poor doctors may fail to see through Craig's story and will issue a script for the morphine as requested; alternatively, they may say no so aggressively that there is no opportunity to work with Craig on his addiction or other problems, such as the past history of abuse.

## Reference

1. Sim, MG, Hulse, GK & Khong, E 2004, 'Acute pain and opioid seeking behaviour', *Australian Family Physician*, vol. 33, no. 12, pp. 1009–12.

## Further Reading

Bird, S 2006, 'Prescribing Schedule 8 drugs', *Australian Family Physician*, vol. 35, nos. 1–2, pp. 59–60.

Lampropoulos, B 2007, 'Substance abuse and harm minimisation in adolescents', *Australian Family Physician*, vol. 36, no. 8, pp. 602–4.



# Case 12 Wazza Wainright

## Instructions for the doctor

This is a short case. The Austroads document 'Assessing Fitness to Drive' will be available in the consultation room.

**Scenario**

Wazza Wainright, aged 48, drives road trains for a living. He has booked in to see you for his commercial driving licence renewal. Wazza attends your practice but this is the first time that you have seen him. Your receptionist has handed you his completed patient questionnaire as below. The results of the physical examination will be available to you on request from the facilitator. Please outline your management to Wazza.

The information on his summary sheet concurs with the patient questionnaire.

# Instructions for the patient Wazza Wainright

You are a 48-year-old road train driver. You enjoy the freedom of the open road but staying awake on long stretches has become more difficult. You keep yourself going with energy drinks, such as Red Bull, and strong coffee. Some of the younger drivers have tried to sell you amphetamines but you've resisted. Your diet is dependent on what you can buy at roadhouses.

You look forward to your days off at home but recently all you seem to do is fall asleep during the day when you try to relax. You get to sleep OK but your partner seems to spend half the night telling you to stop snoring or shouting at you to start breathing.

You have booked this consultation to renew your commercial driving licence.

# Instructions for the facilitator

Please hand the doctor the completed driver's licence questionnaire and clinical examination proforma on request. See below and overleaf.

## APPENDIX 2.2 – PATIENT QUESTIONNAIRE

### PATIENT QUESTIONNAIRE

Name WAZZA WAINRIGHT

Address

***Please answer the questions by ticking the correct box. If you are not sure, leave the question blank and ask your doctor what it means. The doctor will ask you additional questions during the examination.***

| | | No | Yes |
|---|---|---|---|
| 1. | Are you currently being treated by a doctor for any illness or injury? | ✓ | |
| 2. | Are you receiving any medical treatment or taking any medication (either prescribed or otherwise)? *(Please take any medications with you to show the doctor)* | ✓ | |
| 3. | Have you ever had, or been told by a doctor that you had any of the following? | | |
| 3.1 | High blood pressure | ✓ | |
| 3.2 | Heart disease | ✓ | |
| 3.3 | Chest pain, angina | ✓ | |
| 3.4 | Any condition requiring heart surgery | ✓ | |
| 3.5 | Palpitations/irregular heartbeat | ✓ | |
| 3.6 | Abnormal shortness of breath | ✓ | |
| 3.7 | Head injury, spinal injury | ✓ | |
| 3.8 | Seizures, fits, convulsions, epilepsy | ✓ | |
| 3.9 | Blackouts, fainting | ✓ | |
| 3.10 | Stroke | ✓ | |
| 3.11 | Dizziness, vertigo, problems with balance | ✓ | |
| 3.12 | Double vision, difficulty seeing | ✓ | |
| 3.13 | Colour blindness | ✓ | |
| 3.14 | Kidney disease | ✓ | |
| 3.15 | Diabetes | ✓ | |
| 3.16 | Neck, back or limb disorders | ✓ | |
| 3.17 | Hearing loss or deafness or had an ear operation or use a hearing aid | ✓ | |
| 3.18 | Do you have difficulty hearing people on the telephone (including use of hearing aid if worn)? | ✓ | |
| 3.19 | Have you ever had, or been told by a doctor that you had a psychiatric illness, or nervous disorder? | ✓ | |
| 3.20 | Have you ever had any other serious injury, illness, operation, or been in hospital for any reason? | ✓ | |
| 4.1 | Have you ever had, or been told by a doctor that you had a sleep disorder, sleep apnoea, or narcolepsy? | ✓ | |
| 4.2 | Has anyone noticed that your breathing stops or is disrupted by episodes of choking during your sleep? | | ✓ |

4.3 How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired? *This refers to your usual way of life in recent times. Even if you haven't done some of these things recently try to work out how they would have affected you.*

*Use the following scale to choose the most appropriate number for each situation:*

**0** = would never doze off
**1** = slight chance of dozing
**2** = moderate chance of dozing
**3** = high chance of dozing

*It is important that you put a number (0 to 3) in each of the 8 boxes*

| Situation | Chance of dozing (0–3) |
|---|---|
| Sitting and reading | 3 |
| Watching TV | 3 |
| Sitting, inactive in a public place (e.g. a theatre or meeting) | 3 |
| As a passenger in a car for an hour without a break | 3 |
| Lying down to rest in the afternoon when circumstances permit | 3 |
| Sitting and talking to someone | 1 |
| Sitting quietly after a lunch without alcohol | 3 |
| In a car, while stopped for a few minutes in the traffic | 2 |

## APPENDIX 2.3 – CLINICAL EXAMINATION PROFORMA

### CLINICAL EXAMINATION PROFORMA

Driver/Patient Name WAZZA WAINRIGHT

Address

The examiner will be guided by findings in the questionnaire or a referral letter and may apply appropriate tests other than those outlined here, e.g. Mini Mental State or equivalent for cognitive conditions. This form is to be retained by the examining health professional and not returned to the Driver Licensing Authority. Findings relevant to the person's fitness to drive should be recorded on the Medical Certificate supplied by the Driver Licensing Authority.

**1. Cardiovascular System:**

*1.1 Blood Pressure (repeat if necessary)*

| | | | | |
|---|---|---|---|---|
| Systolic | 136 | mm Hg | | mm Hg |
| Diastolic | 82 | mm Hg | | mm Hg |

*1.2 Pulse Rate:* 68 ☑ Regular ☐ Irregular

*1.3 Heart Sounds:* ☑ Normal ☐ Abnormal

*1.4 Peripheral Pulses:* ☑ Normal ☐ Abnormal

**2. Chest/Lungs:** ☑ Normal ☐ Abnormal

**3. Abdomen (liver):** ☑ Normal ☐ Abnormal

**4. Neurological/Locomotor:**

*4.1 Cervical spine rotation* ☑ Normal ☐ Abnormal

*4.2 Back movement* ☑ Normal ☐ Abnormal

*4.3 Upper Limbs*

(a) Appearance ☑ Normal ☐ Abnormal

(b) Joint movements ☑ Normal ☐ Abnormal

*4.4 Lower Limbs*

(a) Appearance ☑ Normal ☐ Abnormal

(b) Joint movements ☑ Normal ☐ Abnormal

*4.5 Reflexes* ☑ Normal ☐ Abnormal

*4.6 Romberg's sign ** ☑ Normal ☐ Abnormal

*(*A pass requires the ability to maintain balance while standing with shoes off, feet together side by side, eyes closed and arms by sides, for thirty seconds)*

**5. Vision:**

*5.1 Visual Acuity*

| Uncorrected | | Corrected | |
|---|---|---|---|
| R | L | R | L |
| 6/12 | 6/12 | 6/5 | 6/6 |

Are contact lenses worn? ☑ No ☐ Yes

*5.2 Visual Fields (Confrontation to each eye)*

☑ Normal ☐ Abnormal

**6. Hearing** ***(Commercial drivers only)***

☑ Normal ☐ Abnormal

**7. Urinalysis**

*7.1 Protein:* ☑ Normal ☐ Abnormal

*7.2 Glucose:* ☑ Normal ☐ Abnormal

**8. Neuropsychological Assessment.**

*Where clinically indicated apply the Mini Mental State Questionnaire or General Health Questionnaire or equivalent.*

*Score*

**RELEVANT CLINICAL FINDINGS**

*Note comments on any relevant findings detected in the questionnaire or examination, making reference to the requirements of the standards outlined in the AFTD publication.*

BMI 46 kg/m²
ht 1.8m
wt 149 kg

**IMPORTANT:** ***For privacy reasons, the completed Examination Proforma must not be returned to the Driver Licensing Authority. Medical information relevant to driver licensing should be included on the Medical Certificate (in the case of Driver Licensing Authority-initiated examinations) or on the Medical Condition Notification Form (for assessments made in the course of patient treatment).***

# Suggested approach to the case

## Diagnostic phase

Establish rapport

Read patient questionnaire

Request and read examination findings

Summarise findings of high score on Epworth sleepiness scale and very high body mass index and suspected obstructive sleep apnoea

Check Austroads Medical Standard for Commercial Vehicle Licence.

## Management phase

Explain that commercial vehicle standards are not met, licence cannot be renewed

Actively listen and watch for response and acknowledge

Explain need for referral to specialist physician for sleep studies

Explain likely relationship between sleep apnoea and obesity

Encourage initiation of increased exercise and decreased calorie intake

Ensure of ongoing support, arrange follow-up and offer health check

Document advice in records.

## Case commentary

Assessing fitness to drive can be a challenging aspect of general practice as the GP's public health role may need to take precedence over the role of caring for an individual patient. Doctors are not expected to remember the Fitness to Drive[1] standards but should be familiar with the document and find the information that shows Wazza does not meet the commercial licence standards. For Wazza this will mean loss of his livelihood until he can either be treated, for example with continuous positive airways pressure,[2] or see if significant weight loss will reverse the symptoms.

Obesity is a risk factor for multiple chronic diseases and Wazza should be offered a preventive health check, though maintaining a therapeutic relationship when you have just removed someone's driving licence tests communication skills.

# References

1. Austroads 2003, *Assessing fitness to drive*, www.austroads.com.au/aftd/index.html, accessed 22 June 2010.
2. Giles, TL, Lasserson, TJ & Smith, BH et al. 2006, 'Continuous positive airways pressure for obstructive sleep apnoea in adults', *Cochrane database of systematic reviews*, vol. 3, p. CD001106.

# Further reading

Desai, AV, Ellis, E & Wheatley, J et al. 2003, 'Fatal distraction: a case series of fatal fall-asleep road accidents and their medicolegal outcomes', *Medical Journal of Australia*, vol. 178, no. 8, pp. 396–9.

Kee, K & Naughton, MT 2009, 'Sleep apnoea: a general practice approach', *Australian Family Physician*, vol. 38, no. 5, pp. 284–8.



# Section 5 Child health
# Case 13 Kylie Chong

## Instructions for the doctor

This is a short case.

Kylie does not attend this appointment but please take a history from her mother, Ilana, and make suggestions for management. You are required to focus on the presenting complaint only.

**Scenario**

Kylie Chong is an 8-year-old girl who has seen you a few times for minor illnesses in childhood. Kylie's mum, Ilana, has booked to see you today because 'Kylie is out of control and won't do what she is told'. Ilana wants you to prescribe the drug that is used in attention deficit hyperactivity disorder (ADHD).

# Instructions for Kylie's mother Ilana Chong

You have three children and work part-time as a cleaner. You were brought up in Australia and so was your husband. His family emigrated to Australia from China. Your husband and his family consider child rearing to be the mother's main responsibility.

Kylie is the middle child of the family. From the beginning she has been a challenge but recently you just cannot control her. She is doing OK at school but her behaviour is very disruptive at home. It is so frustrating that the teachers report her to be good while at home Kylie is disobedient and will not join in with the family. Getting her up to go to school in the mornings is a nightmare and at weekends all she does is watch TV and eat junk food. You have tried an elimination diet but that made no difference.

You have come to the doctor today because you have heard there is a drug for attention deficit hyperactivity disorder (ADHD) and you think it might be the answer for Kylie.

If the doctor asks about the three main symptoms of ADHD of inattention, hyperactivity and impulsiveness, you are to answer that Kylie does NOT have these symptoms.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Kylie's mum's ideas, concerns and expectations.

### Specific questions

Kylie's behaviour—define the issues

Interests

Friendships

Relationship with siblings and family

Sleep

School performance, reports from teachers

General health, appetite, mood

Test against criteria expected in ADHD
- —Inattention
- —Hyperactivity
- —Impulsiveness.

### Most likely diagnosis

Outline that ADHD doesn't seem likely

Sensitively suggest that it is a behavioural issue

Important to address the problem now

Praise Ilana for coming along now—lots of options for change.

### Management

Outline available options
- —Positive parenting groups
- —Agreed family rules—reward appropriate behaviour, ignore undesirable behaviour
- —Negotiate with whole family about the issue, involve dad if possible
- —Family therapy

Assure of continued support.

## Case commentary

Kylie is causing problems but the doctor needs to work out whether she has ADHD. This is characterised by inattention, hyperactivity and/or impulsiveness. This does not fit with Kylie's story of being able to concentrate on the TV for much of the day and her reasonable performance and behaviour at school.

The doctor will need to demonstrate empathy with Ilana about Kylie's problem and sensitively explain that the treatment for ADHD will not help, as it seems to be more of a behavioural issue. The doctor can then outline the options available to assist Ilana and her family. This could entail support and guidance from the GP or referral to more specialised children's services, depending on local availability and Ilana's choice.

# Further reading

Halasz, G 2009, 'Attention deficit hyperactivity disorder: time to rethink', *Medical Journal of Australia*, vol. 190, no. 1, pp. 32–3.

Parry, TS 2005, 'Assessment of developmental learning and behavioural problems in children and young people', *Medical Journal of Australia*, vol. 183, no. 1, pp. 43–8.

Rader, R, McCauley, L & Callen, EC 2009, 'Current strategies in the diagnosis and treatment of childhood attention-deficit/hyperactivity disorder', *American Family Physician*, vol. 79, no. 8, pp. 657–65.

# Case 14 Brandon Harkness

## Instructions for the doctor

This is a short case.

You are expected to take a history from Brandon's mother, Julie. Results of the examination will be available from the facilitator. Outline your differential diagnosis to Julie and negotiate a management plan.

**Scenario**

Brandon is a lively two-year-old Caucasian boy. He has been a patient at the surgery since he was born and has attended only for coughs and colds and immunisations. His growth has been along the 75th centile.

Four weeks ago Julie brought Brandon in concerned that he had 'gastro'. He had vomited three times in the night and had profuse watery diarrhoea. He was not dehydrated. You advised fluids and expected that the illness would soon resolve.

Today Julie has come to see you because Brandon's diarrhoea is continuing. The following information is on Brandon's summary sheet:

**Medication**
Nil recorded

**Allergies**
Nil recorded

**Immunisations**
Hib × 3
Hep B × 4
Polio × 3
DTPa × 3
Pneumococcal conjugate (7vPCV) × 3
Rotavirus × 3
HZV × 1
Meningococcal × 1
MMR × 1.

# Instructions for Brandon's mother Julie Harkness

You work as a pharmacy assistant three days a week and spend the other days at home with your children. Your daughter, aged four, attends preschool and Brandon, your two-year-old, attends child care.

Four weeks ago Brandon had 'gastro'. He was vomiting and had diarrhoea. The vomiting soon settled and as advised you continued with fluids and reintroduced solids when Brandon seemed hungry.

Brandon is thriving and seems well but the diarrhoea has not stopped. He passes a light-coloured, loose, watery, foul-smelling stool about five times a day and you can see undigested food in it. Previously Brandon passed 1–3 stools per day. The situation is beginning to get you down because the staff at child care are worried about him and keep suggesting that he is not well enough to be there. When you talked with the pharmacist at work she suggested you go back to the GP for a checkup.

The following information is on Brandon's medical record:

**Medication**
Nil recorded

**Allergies**
Nil recorded

**Immunisations**
Hib × 3
Hep B × 4
Polio × 3
DTPa × 3
Pneumococcal conjugate (7vPCV) × 3
Rotavirus × 3
HZV × 1
Meningococcal × 1
MMR × 1.

# Information for the facilitator

### Clinical examination findings

Clinical examination is entirely normal. Brandon's weight and height are on the 75th centile.

# Suggested approach to the case

Establish rapport

Open-ended questions to explore Julie's ideas, concerns and expectations.

### Specific questions

Details about the episode of gastro

Details about the diarrhoea—frequency, smell, blood, colour, consistency, mucus

Systemic upset

Abdominal pain

Appetite and thirst

Current diet—any observed relationship between diet and diarrhoea

Consumption of fruit, fruit juice, milk

Medications used

Known allergies

Anyone else in family with diarrhoea

What else has Julie tried?

Any recent travel

Request permission to examine.

### Examination

Ask the facilitator for specific examination findings

Level of alertness, responsiveness and hydration

Weight and height plotted on centile chart (75th centile)

Pulse

Temperature

Ears

Absence of jaundice

Abdominal examination
—No tenderness elicited
—No masses found
—No organomegaly.

### Differential diagnoses

Toddler's diarrhoea (also known as chronic non-specific diarrhoea)

Temporary lactose or other disaccharide intolerance

Worth excluding infectious cause, e.g. *Giardia*.

### Management

Reassure

Regular weighing and follow-up

Check for pathogens—stool for MCS and o.c.p.

Advise balanced diet, avoid snacks, reduce consumption of fruit juice

If not settling, test stool pH and for sugars using Clinitest or glucose test strips.[2]



## Case commentary

The most important clinical feature is that Brandon is thriving. The fact that he is still on the 75th centile excludes any potentially serious cause of the diarrhoea and the doctor should emphasise this with Julie.

Brandon's symptoms are characteristic of toddler or chronic non-specific diarrhoea, the commonest cause of diarrhoea in children aged 1–5 years. Some speculate this is an iatrogenic problem that starts when parents are advised to push fluids, including fruit juices, and reduce fibre and fat intake, in children with gastroenteritis.[1] Children then enter a vicious cycle of diarrhoea and further dietary restrictions aimed at curing the diarrhoea. Treatment is rebalancing the 'four Fs'—Fat, Fibre, Fluid and Fruit juices—by reintroducing well-defined meals and snacks. Fruit juices, in particular clear apple juice, and other squashes should be limited. Toddler diarrhoea might be prevented by advising that children with acute diarrhoea require

initial rehydration and then resumption of a normal feeding pattern as soon as it is tolerated.

Other common possible causes of Brandon's diarrhoea are residual infection (such as with *Giardia*), carbohydrate intolerance or temporary lactose intolerance. Carbohydrate intolerance results in unabsorbed disaccharides in the stool which show positive on Clinitest or glucose testing strips.[2] Fermentation of unabsorbed sugars produces acids which yield a stool pH of < 5.5. In temporary lactose intolerance, reduction of milk-based products is recommended for a short time. If the symptoms do not resolve in a week then this is not the cause of the problem and milk can be reintroduced. More complex changes to his diet would need supervision from a dietician to ensure any benefit in reducing the diarrhoea is not achieved at the expense of malnutrition.

The concern of the day care centre about Brandon's diarrhoea should be discussed. Once a stool test is confirmed as clear, Brandon can attend again and will not pose a risk to the health of the other children or the carers. The GP can offer to put this in writing to the day care centre or even offer to run an in-service training session for staff on chronic diarrhoea.

## Reference

1. Kneepkens, C & Hoekstra, J 1996, 'Chronic nonspecific diarrhea of childhood: pathophysiology and management', *Pediatric Clinics of North America*, vol. 43, pp. 375–90.
2. Klish, WJ 2006, 'Chronic non specific diarrhoea of childhood' in McMillan, JA, Feigin, RD & De Angelis, CD et al. (eds), Oski's pediatrics principles and practice, Lippincott Williams & Wilkins, pp. 1924–6.

## Further reading

Branski, D, Lerner, A & Lebenthal, E 1996, 'Chronic diarrhea and malabsorption'. *Pediatric Clinics of North America*, vol. 43, no. 2, pp. 307–31.

O'Loughlin, E 1988, 'Chronic diarrhoea', *Australian Family Physician*, vol. 17, pp. 985–8.

Valman, H 2000, *Chronic diarrhoea. ABC of one to seven*, BMJ Books, London.



# Case 15 Natalie Jones

## Instructions for the doctor

This is an eight-minute station.

Please conduct this consultation as you would in your clinical practice.

**Scenario**

Mrs Jacinta Jones comes in to see you to discuss Natalie, her six-year-old daughter. She had taken Natalie to a paediatrician because her asthma was not well controlled on her medication of prophylactic cromoglycate and salbutamol.

You have read the letter from the paediatrician suggesting that Natalie start on inhaled steroids. You are not quite sure why Mrs Jones has booked this appointment to see you today, particularly as she did not come to see you about Natalie before going to the paediatrician.

# Instructions for Natalie's mother Jacinta Jones

You are an articulate business executive in your late thirties. You live in a large house in a prestigious area of Sydney and travel a substantial amount for work. Natalie is your only child and you had her 'later on' so that you could establish your career first. Your husband is also in business and leaves the child care arrangements to you.

Natalie is six years old and has asthma. You are often up at night when she coughs and this is exhausting for both of you. Natalie uses a salbutamol inhaler and cromoglycate as a preventer. You recently took Natalie to see a private paediatrician about the asthma. You did not ask your GP for a referral.

You are concerned that the paediatrician has decided to start Natalie on steroids. You know they are banned in athletes and do not understand why they are being given to Natalie. You have made an appointment to see the GP and have the following questions on your mind:

1. Why has Natalie been recommended steroids? How do they work?
2. Is there any alternative medication that could be tried?
3. How will the GP know if the medication is helping Natalie?
4. How will the GP watch to make sure Natalie isn't getting any side effects from the medication?
5. The paediatrician gave you a funny box (a spacer) for helping Natalie use the medication. You are not sure how to use it and would like the doctor to show you how to use it.

## Suggested approach to the case

Establish rapport

Open-ended questions to establish Mrs Jones' ideas, concerns and expectations about this consultation and Natalie's asthma

Answer Mrs Jones in terms that are understood, in a non-judgmental manner.

1. Explain that asthma is due to inflammation. Steroids are anti-inflammatory and will reduce the amount of wheezing and coughing and make it easier for Natalie to breathe.

   Explore why Mrs Jones is concerned about steroids: what has she heard about them and from whom? Tailor further answers about steroids to Mrs Jones' specific concerns.

   Mrs Jones has heard that steroids are banned in athletes. The doctor can reassure her that there are different types of steroids and that the body-building steroids abused by some athletes are different from the anti-inflammatory steroids used in asthma.
2. Explore with Mrs Jones what medication has already been tried. Outline the rationale for obtaining good asthma control and for helping Natalie to feel better. Natalie has previously tried regular cromoglycate as a preventer and uses salbutamol for symptom relief. She has not tried other medication. The next step according to current guidelines is to introduce inhaled corticosteroids; leukotriene antagonists are an option in children with mild persistent asthma.[1]
3. Explain the role of monitoring Natalie's asthma symptoms. Asthma control is monitored by:
   - —Assessment of symptoms—cough, wheeze, nocturnal cough, shortness of breath, exercise tolerance
   - —Absence of signs—wheeze, peak expiratory flow rate, spirometry
   - —Function—can Natalie do all the sport and activities that she would like to or does her asthma stop her?
4. Side effects such as oral thrush and dysphonia are possible with inhaled corticosteroids. These can be reduced by using a spacer and rinsing the mouth after inhalation. Longer-term side effects include the development of cataracts, reduced bone density, depression of the hypothalamic-pituitary-adrenal axis and delay in growth.

   The list of potential problems from inhaled corticosteroids is long. The doctor needs to give a balanced description of the potential risks and benefits of this medication.

The doctor can inform Mrs Jones that the lowest effective dose of inhaled steroids will be used and that Natalie's growth and general development will be monitored. The evidence is that older inhaled corticosteroids, such as beclomethasone, mainly delay growth rather than inhibit it. Long-term studies show that inhaled corticosteroids in conventional doses do not have significant long-term effects on growth and the benefits outweigh the side effects.[2] The effect of fluticasone on growth may be less but the outcome of long-term studies is awaited.[3]

5. Demonstrate use of spacer device.



## Case commentary

This case tests the doctor's communication skills and understanding of the management of childhood asthma. Another twist is the potential for interprofessional issues to interfere with Natalie's care.

In the health system in Australia patients are referred to specialists by their GPs. However, many people are willing to pay for direct access to specialists. Natalie's asthma is not severe and would normally be dealt with by a GP. The GP may feel undermined that Mrs Jones has taken Natalie to a specialist.

Wounded professional pride is compounded by having to deal with Mrs Jones' response to the suggestions of inhaled corticosteroids. The GP should put aside their own reactions and approach Mrs Jones professionally and in Natalie's best interests.

The doctor needs to explore why Mrs Jones is concerned about giving Natalie steroids. While the doctor could guess at the causes for her concern from their general knowledge of patients' reactions, the reassurance will be more effective if it addresses Mrs Jones' particular fears.

Some doctors may feel threatened by Mrs Jones' questioning of medical advice. A good doctor will be able to discuss the issue with Mrs Jones as if in a partnership whereas a poor doctor may show irritation and resort to medical dominance or cave in and, in an effort to appease Mrs Jones, deny Natalie the medication she needs.

Spacers come with simple written instructions, as I discovered as a young mum with a wheezy child. If you are not confident in using a spacer or in instructing others how to use a spacer, ask your local pharmacist if you can look at one and read the instructions for use.

# References

1. National Asthma Council 2006, *Asthma management handbook 2006*, Melbourne.
2. Doull, I 2004, 'The effect of asthma and its treatment on growth', *Archives of Diseases of Childhood*, vol. 89, pp. 60–3.
3. Robinson, PD & Van Asperen, P 2009, 'Asthma in childhood', *Pediatric Clinics of North America*, vol. 56, no. 1, pp. 191–226.

# Section 6 Dermatology
# Case 16 Sammy Burnside

## Instructions for the doctor

This is a short case.

Please take a history from Jeanette, Sammy's mum. A clinical photograph of Sammy's skin problem will be available for you on request. Refer to Figure 3, centre insert page B. Please advise on the management of the condition.

**Scenario**

Sammy is a four-month-old girl who has an itchy rash.

The following information is on her summary sheet:

**Past medical history**
Normal vaginal delivery following uncomplicated pregnancy

**Medication**
Nil prescribed

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Mother asthmatic and allergic rhinitis
Father eczema as a baby.

# Instructions for Sammy's mother Jeanette Burnside

You had a busy life as a teacher at the local pre-school. You are on maternity leave following Sammy's birth but are soon due to return to work. Sammy has had an itchy rash on her face, arms, legs and trunk for a few weeks. You've been using creams your Mum bought for you, plus tea-tree oil. You hate seeing your beautiful baby so distressed by the scratching and are worried about the thought of putting Sammy into child care when you return to work. You have asthma and allergic rhinitis and your partner had eczema as a baby.

The following information is on Sammy's medical record:

**Past medical history**
Normal vaginal delivery following uncomplicated pregnancy

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Mother asthmatic and allergic rhinitis
Father eczema as a baby.

# Suggested approach to the case

Establish rapport

Explore Jeanette's ideas, concerns and expectations.

## Specific questions

Duration of the rash

Site of the rash

Itch

Precipitating and relieving factors

Impact on Sammy and family

Previous treatment tried

Current treatment—including use of soaps

Request permission to examine.

## Examination

Expose down to underwear
—Dry skin with excoriations
—Widespread patches of eczema
—Exclude secondary infection.

## Diagnosis

Eczema

Plus possible contact allergy to tea-tree oil.

## Management

Confirmation of diagnosis of eczema

Stop use of tea-tree oil

Explanation that eczema can be controlled but not cured

Often improves as child grows up.

## Prevention

Reduce dryness: avoid baths, bubble baths, soaps and creams with additives, use soap substitute and regular emollients such as 10% glycerine

Reduce heat factors of excess clothing or synthetic bedding

Observe to identify and then avoid triggers/allergens

Continue to reduce scratching with gloves.

### Treatment

Intermittent topical steroid

Trial of antihistamine to stop pruritus

Treat infections if present

Discuss diet—varied evidence of impact

Plan follow-up

Consider referral if no improvement.



## Case commentary

The key issue in this case is to demonstrate competence in the management of a common skin condition. There are no hidden twists in this case. A good doctor will establish a good relationship with Jeanette and explore the social and psychological impact of the problem as well as discuss medical management. For example the doctor could allow Jeanette to express her concerns about returning to work and having to ask staff at the child care centre to put on creams. Or ask what impact is the problem having on her relationship with Sammy or her partner?

About 75% of children grow out of their eczema by the age of five, but the strong family history of atopy makes this less likely in Sammy's case. Regular use of emollients and intermittent topical steroids are the mainstay of therapy; topical calcineurin inhibitors and cognitive behavioural therapy to break the itch/scratch cycle are welcome developments in eczema management for older children.[1]

The role of food allergy is controversial: allergen testing is recommended in severe eczema. Elimination diets need to be supervised by a dietician.[2]



## Common pitfalls

Pitfalls to avoid are the prescription of steroid creams without explanation regarding judicious use—avoiding both under-treatment and over-treatment—and the potential side effects, and failing to consider that the tea-tree oil is exacerbating the problem.

# References

1. Ross, T, Ross, G & Varigos, G 2005, 'Eczema: practical management issues', *Australian Family Physician*, vol. 34, no. 5, pp. 319–24.
2. Katelaris, CH & Peake, JE 2006, 'Allergy and the skin: eczema and chronic urticaria', *Medical Journal of Australia*, vol. 185, no. 9, pp. 517–22.



# Case 17 Robert Kerslake

## Instructions for the doctor

This is a short case.

You are expected to take a brief history from Robert regarding a rash. A photograph of his rash will be available. There is no need to conduct any further examination. Outline to Robert your diagnosis and suggestions for management.

**Scenario**

Robert Kerslake is a 24-year-old chef with a rash on the outside of his right and left elbows. He has tried some 1% hydrocortisone cream purchased over the counter and it cleared the rash for a short time; however, it recurs each time he stops using it.

The following information is on his summary sheet:

**Past medical history**
Chickenpox aged 8

**Medication**
Nil recorded

**Allergies**
Nil recorded

**Immunisations**
Up to date

**Social history**
Lives alone
Smokes 10–20 cigarettes per day.

# Instructions for the patient Robert Kerslake

You are 24 years old and work as a chef. You work long hours and the kitchen is often very hot. A few months ago you developed a rash on your elbows. You bought some hydrocortisone cream from a chemist and when you use it the rash goes; as soon as you stop using it, the rash reappears. The rash is only on your arms.

The rash is annoying you more and more and it is getting you down. Normally you like to socialise but the rash is making you stay home rather than going out with your mates and you are worried customers may think the rash is infectious.

You have no family history of skin disease and have no joint, hair or nail problems. You are keen to find out from the doctor what the rash is and what can be done about it.

You have psoriasis. When the doctor asks to look at the rash please show them the photograph. Refer to Figure 2, centre insert page A.

The following information is on your medical record:

**Past medical history**
Chickenpox aged 8

**Medication**
Nil recorded

**Allergies**
Nil recorded

**Immunisations**
Up to date

**Social history**
Lives alone
Smokes 10–20 cigarettes per day.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Robert's concerns, ideas and expectations for the consultation.

### Specific questions

Explore the symptoms of the rash and impact on his life

Ask about other involvement, e.g. joint pain, nails or hair

Ask about treatment so far

Observe clinical photograph.

### Most likely diagnosis

Psoriasis.

### Management

Confirm diagnosis of psoriasis

Inform psoriasis is noninfectious
- —Treatment aimed at containment, not cure
- —Discuss impact of stress

Topical treatments
- —Sunlight—improves psoriasis; balance sun exposure to help psoriasis while minimising risk of skin cancer
- —Emollients—liquid/soft paraffin or 10% glycerine
- —Salicylic acid
- —Vitamin D analogues such as calcipotriol
- —Coal tar preparations
- —Dithranol
- —Cautious use of corticosteroids

Systemic treatments—would require referral to a dermatologist
- —Light therapy
- —Retinoids
- —Traditional systemic therapy, e.g. methotrexate or cyclosporine
- —Immunomodulatory drugs such as alefacept and etanercept

Offer information about support groups, patient education leaflet

Opportunistic health promotion
—Assess motivation to stop smoking

Arrange follow-up.

## Case commentary

Psoriasis affects over 6% of Australian Caucasian adults and can be diagnosed on the clinical characteristics of well-defined, erythematous, thickened plaques covered with adherent silvery scales.[1] Psoriasis is an auto-immune related condition in genetically susceptible individuals: activated T lymphocytes release cytokines that cause keratinocyte proliferation.[2] While the diagnosis is easy, treatment is can be messy and is aimed at containing the problem rather than cure. Topical steroids and calcipotriene together may work better than either agent alone. Patients with psoriasis involving more than 20 per cent of their skin or those not responding to topical therapy are candidates for systemic therapy.[3]

There is a high financial[4] and emotional cost to psoriasis.[5] A biopsychosocial framework will assist doctors to cover the important aspects of management. Robert needs advice on what medications to use and how to use them but may also wish to discuss the impact that the psoriasis has on his self-image, his relationships and his work.

# References

1. Cowen, P 2001, 'Management of psoriasis', *Australian Family Physician*, vol. 30, no. 11, pp. 1033–7.
2. Nestle, FO, Kaplan, DH & Barker, J 2009, 'Psoriasis', *New England Journal of Medicine*, vol. 361, no. 5, pp. 496–509.
3. Luba, KM & Stulberg, DL 2006, 'Chronic plaque psoriasis', *American Family Physician*, vol. 73, no. 4, pp. 636–44.
4. Jenner, N, Campbell, J & Plunkett, A et al. 2002, 'Cost of psoriasis: a study on the morbidity and financial effects of having psoriasis in Australia', *Australasian Journal of Dermatology*, vol. 43, pp. 255–61.
5. Magin, PJ, Adams, J & Heading, GS et al. 2009, 'Patients with skin disease and their relationships with their doctors: a qualitative study of patients with acne, psoriasis and eczema', *Medical Journal of Australia*, vol. 190, no. 2, pp. 62–4.



# Section 7 Ear, nose and throat
# Case 18 Ruby Chan

## Instructions for the doctor

This is a short case.

Please take a history, conduct a focused examination and outline your diagnosis and management plan to the patient.

**Scenario**

Ms Ruby Chan is 40 years old and works long hours at the local club. She has booked this appointment to see you because of facial pain.

You practise in a small rural town of 600 people. You are the only resident health professional.

The following information is on Ruby's summary sheet:

**Past medical history**
Two children
One termination of pregnancy aged 16

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil known

**Pap smear**
Up to date

**Social history**
Works at the Memo Club
Non-smoker
Alcohol intake—special occasions only.

# Instructions for the patient Ruby Chan

You are a 40-year-old woman who has had facial pain for a few days. It is getting worse and it kept you awake last night. You have had a cold and are overdue for a checkup at the dentist. The nearest dentist is over 50 km away. The pain is worse when you chew food. You have a slight headache but this does not get worse on bending forwards or sneezing. Your sense of smell is undisturbed.

Your father died of cancer of the tongue. You have never been sure exactly what this is but it does mean that you are more concerned than normal about your pain. You would like the doctor to find this out but will not reveal this unless asked appropriately.

## Clinical examination findings

Tapping of one of your molars gives you significant pain.

The following information is on your medical record:

**Past medical history**
Two children
One termination of pregnancy aged 16

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil known

**Pap smear**
Up to date

**Social history**
Works at the Memo Club in a rural town of 600 people
Non-smoker
Alcohol intake—special occasions only.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Ruby's ideas, concerns and expectations.

### Specific questions

Ask about the pain, e.g. using **OLD CARTS** acronym:

- —**O**nset
- —**L**ocation
- —**D**uration, diurnal variation
- —**C**haracteristics—worse on chewing food
- —**A**ssociated symptoms
- —**R**elieving factors
- —**T**reatment tried so far
- —**S**everity

Seek permission to examine

Exclude systemic symptoms—weight changes, energy level, sleep disturbance

Request permission to examine.

### Examination

Temperature

Inspect and/or palpate head and neck

Check teeth, lymph nodes, skin, eyes, salivary glands, temporomandibular joint, cervical spine, nose, mouth, pharynx and postnasal space, sinuses.

### Most likely diagnosis

Dental pain.

### Management

Urgent dental consultation

Pain relief—aspirin or paracetamol, clove oil.

### Extras for this case

Explore patient's concerns resulting from her father's cancer and previous occupational exposure to cigarette smoke

Explain need for patient to book another appointment to discuss vaccination status.

## Case commentary

Ruby's pain is caused by a sore tooth. This will become obvious as the doctor takes the history and taps the teeth. After hours and in rural areas GPs are often required to provide care for dental problems. Antibiotics are only indicated if there is possible cellulitis secondary to an infected tooth.[1] Dental abscesses require incision and drainage and root canal treatment or extraction.

There is a long list of possible features to check in the face.[2] A good doctor can focus promptly on examination of the teeth, lymph nodes and temporomandibular joints. If tapping the teeth with a tongue depressor reproduces the pain there is no need to proceed with further examination. The time can then be spent explaining the diagnosis, planning management and exploring any particular concerns that Ruby has. A doctor who does a complete examination will not have time to explore the concerns about Ruby's father's tongue cancer or have time to discuss Ruby's vaccination status.

# References

1. Annino, DJ Jr & Goguen, LA 2003, 'Pain from the oral cavity', *Otolaryngologic Clinics of North America*, vol. 36, no. 6, pp. 1127–35.
2. Quail, G 2005, 'Atypical facial pain: a diagnostic challenge', *Australian Family Physician*, vol. 34, no. 8, pp. 641–5.

# Further reading

Kingon, A 2009, 'Solving dental problems in general practice', *Australian Family Physician*, vol. 38, no. 4, pp. 211–16.



# Case 19 Jane Matthews

## Instructions for the doctor

This is a short case.

**Scenario**

Mrs Jane Matthews is a 31-year-old woman who is pregnant for the first time. She is coming to see you because she has noticed a swelling in her neck just below her 'Adam's apple'. You will be expected to take a brief history of the swelling, before conducting a focused examination. Please tell the facilitator your findings and suspected diagnosis.

The following information is on her summary sheet:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil recorded

**Pap smear**
Normal this year

**Family history**
Nil significant

**Social history**
Married
Works as a hairdresser.

# Instructions for the patient Jane Matthews

You are a 31-year-old married hairdresser. You are excited about being pregnant for the first time. Everything has been going well. Last week you were on holiday and have just been sorting the photos. Your neck looked a bit odd in the photos and you have now had a closer look in the mirror. There is a smooth swelling in the middle below your Adam's apple.

You saw your GP last week about the pregnancy and the check up was fine. You have booked today's appointment just to sort out the swelling. You are not particularly worried about it.

## Clinical examination findings

You have a diffuse goitre but no other physical findings or symptoms.

The following information is on your medical record:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil recorded

**Pap smear**
Normal this year

**Family history**
Nil significant

**Social history**
Married
Works as a hairdresser.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore patient's ideas, concerns and expectations.

### Specific questions

Weight loss, appetite, vomiting, lumps elsewhere

Heat tolerance, energy levels, palpitations, tremor, and difficulty swallowing solids or liquids

Change in voice, change in skin or hair, sweating, sleep

Family history: any family history of thyroid problems, diabetes

Request permission to examine.

### Examination

Inspection of the swelling

Palpation
- —Site
- —Size
- —Consistency
- —Tenderness

Movement on swallowing

Percussion—not needed

Auscultation of swelling for bruits

Palpation of lymph nodes of the neck

Examination for thyroid signs
- —Pulse
- —Tremor
- —Eyes—for proptosis
- —Warmth of peripheries
- —Reflexes
- —General skin changes

There is a diffuse thyroid swelling and no other abnormality.

## Case commentary

Benign thyroid enlargement is the most likely cause of a midline neck swelling in a pregnant woman like Jane. A doctor should take a history about the swelling and any local symptoms and establish whether she is clinically hypothyroid or hyperthyroid. The neck examination should reveal that the swelling moves on swallowing. Examination of the lymph nodes should show that the doctor knows the position of the lymph nodes and should be conducted from behind.

Traditional teaching is that any neck swelling or lump requires examination of the scalp, ears, skin, face, mouth and throat. This is vital if the lump is an enlarged lymph node but is not needed in this case where the history and examination findings are so suggestive of a thyroid problem. This is an example of pattern recognition rather than hypothetico-deductive thinking. Experienced GPs use pattern recognition as a method of clinical reasoning because it is much quicker, in this case, allowing the doctor time to check on thyroid status as well as the swelling. Doctors who use the hypothetico-deductive method reasoning through this case will be safe but will have used valuable time on unnecessary issues.

The doctor is not expected to discuss management of the swelling.

# Further reading

Brennan, M & French, J 2007, 'Thyroid lumps and bumps', *Australian Family Physician*, vol. 36, no. 7, pp. 531–6.

Schwetschenau, E & Kelley, DJ 2002, 'The adult neck mass', *American Family Physician*, vol. 66, no. 5, pp. 831–8.



# Case 20 Pamela Taylor

## Instructions for the doctor

This is a long case.

Please take a history, examine this patient appropriately and discuss with her your differential diagnosis and a management plan.

**Scenario**

You are asked to see Mrs Taylor, a 72-year-old tourist who has recently arrived in town from England. She is feeling dizzy.

# Instructions for the patient Pamela Taylor

You are a 72-year-old lady who is normally well. You have flown from England to stay with your son for three weeks. You had a viral upper respiratory tract infection the week before you travelled.

On the third day of your holiday you experienced nausea and a spinning sensation in your head. You have vomited a few times and the nausea won't go away. The spinning sensation is worse when you change position. It started about 24 hours ago and is slowly easing. You have not had anything like this before.

You have no tinnitus. Your hearing has been slowly deteriorating over the last five years. There is a family history of age-related deafness.

You regularly attend exercise classes in England and your only medication is psyllium with ispaghula one sachet once a day. In the past you have had surgery for a benign thyroid nodule.

You do not have any allergies, have never smoked and drink 1–2 standard alcoholic drinks at the weekend.

## Clinical examination findings

You will experience nausea when asked to move on and off the examination couch

You are unable to maintain eye contact during the head thrust test

No other abnormalities are found on clinical examination.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Pamela's ideas, concerns and expectations.

### Specific questions

Dizziness—spinning feeling or as if about to faint, episodic or continuous

Vertigo—relationship to position

Nausea and vomiting, diarrhoea—exclude gastroenteritis

Tinnitus

Deafness

Previous history of similar episode

Exclude:
- —Fits
- —Cardiac cause
- —Head injury
- —Visual symptoms

Past medical history
- —Medication including OTC and complementary or alternative medicines
- —Allergies

Request permission to examine.

### Examination

Cardiovascular system
- —Pulse
- —BP lying and standing
- —Heart sounds

Neurological examination
- —Cognitive function—no apparent problem
- —Cranial nerves

| | |
|---|---|
| II | visual acuity, exclude papilloedema |
| III, IV, VI | eye movements, look for nystagmus |
| V | sensation |
| VII | opening jaw, facial movements |

VIII otoscope examination, hearing, Rinné and Weber tests
—Coordination—finger-nose or heel-toe test
—Gait
—Romberg's test
—Head thrust test[1]
—Dix-Hallpike manoeuvre[2]

Neck—cervical spine movements.

### Most likely diagnosis

Explain most likely diagnosis of viral neuronitis

Reassurance—expect recovery.

### Investigations

UEC—exclude potassium imbalance as cause of problem or a consequence of vomiting

BSL—to check for diabetes

Consider TFTs, FBC

ECG—consider Holter monitor

Audiometry—needed at some stage.

### Management

Consider prochlorperazine, diazepam (short-term only), short course of oral corticosteroids

Early vestibular rehabilitation

Arrange follow-up

Specialist referral if symptoms persist.

## Case commentary

Dizziness is a common presentation with multiple potential causes. The history is essential to accurate diagnosis. The first step is to establish that Mrs Taylor uses the term dizziness to describe a spinning sensation (vertigo) and does not feel faint (suggests a cardiovascular cause).

The most likely cause in this case is a vestibular neuronitis based on the history and abnormal head impulse test that confirms a vestibulopathy. Benign positional vertigo can be excluded because the vertigo is not

exclusively related to changes in posture. Menière's disease is unlikely because there is no tinnitus. If the symptoms do not resolve, further investigation is needed to check for a cerebellar or cerebral lesion as well as the known vestibulopathy.

If possible, patients are recommended to manage without medication to enable quicker vestibular rehabilitation.

This case provides doctors with an opportunity to practise a neurological examination. This is a skill that is often learned for final year medical exams or the Australian Medical Council examination and then forgotten! It is possible to do this case in the time available but only if the neurological examination is selective and slick.

## References

1. Barraclough, K & Bronstein, A 2009, 'Vertigo', *British Medical Journal*, vol. 339, p. b3493.
2. Kuo, C-H, Pang, L & Chang, R 2008, 'Vertigo: part 1—assessment in general practice', *Australian Family Physician*, vol. 37, no. 5, pp. 341–7.

## Further reading

Kuo, C-H, Pang, L & Chang, R 2008, 'Vertigo: part 2—management in general practice', *Australian Family Physician*, vol. 37, no. 6, pp. 409–13.



# Case 21 Trevor Watts

## Instructions for the doctor

This is a short case.

Please take a history from Trevor. You are not required to examine him. The results of an appropriate examination will be available from the facilitator on request. Outline the most likely diagnosis to the patient and initial suggestions for management.

**Scenario**

Trevor Watts is a 41-year-old man. For the last few months he has noticed a ringing sound in his right ear and sometimes there is ringing in his left ear. At first it did not bother him but now he is finding it very hard to live with. It is beginning to interfere with his sleep and it is getting him down.

He has no known deafness, balance problems or pain in his ears. He is otherwise well.

The following information is on his summary sheet:

**Past medical history**
Laceration left leg following motorcycle accident aged 20

**Medication**
Nil known

**Allergies**
Nil known

**Immunisations**
Up to date

**Social history**
Office manager.

# Instructions for the patient Trevor Watts

You are 41 years old and work as an office manager. For the last few months you have noticed a ringing sound in your right ear; sometimes there is ringing in your left ear. At first it did not bother you but now you are finding it very hard to live with. It is beginning to interfere with your sleep and it is getting you down.

You have no known deafness, balance problems or pain in your ears. You are otherwise well. You do not take any medication.

In your late teens and early twenties you were a drummer in a successful rock and roll band. 'The louder the music the better' was your motto.

You live with your girlfriend and her two children from a previous relationship. You smoke 20 cigarettes a day and drink 10 stubbies of beer every Friday and Saturday night.

The following information is on your medical record:

**Past medical history**
Laceration left leg following motorcycle accident aged 20

**Medication**
Nil known

**Allergies**
Nil known

**Immunisations**
Up to date

**Social history**
Office manager.

# Information for the facilitator

## Clinical examination findings

Pulse 68 regular

BP 132/82 mm Hg

No objective tinnitus

Inspection of the ears including otoscopy: normal pinnas, external auditory canal and eardrums

Hearing—normal whisper test, normal Rinné and Weber tests

Balance—normal Romberg's test

Audiometry—bilateral sensorineural high frequency deafness

Cranial nerves normal

Facial examination normal.

# Suggested approach to the case

Establish rapport

Open-ended questions to elicit Trevor's ideas, concerns and expectations.

## Specific questions

Tinnitus—pitch, frequency, duration, character (pulsatile or not), continuous or intermittent

Deafness

Balance

Pain

Vertigo

Medication—exclude use of ototoxic drugs such as aspirin, loop diuretics

Past noise exposure—occupational or recreational

Past history of infections, surgery or trauma

Exclude depression with screening questions

Exclude serious neurological problem.

### Ask for the examination findings

Pulse

BP

No objective tinnitus

Ear inspection with otoscope

Hearing—whisper test, Rinné and Weber

Balance—Romberg's test

Cranial nerves normal

Facial examination normal.

### Most likely diagnosis

Tinnitus—caused by noise exposure.

### Investigations

BSL

Audiometry—bilateral high frequency sensorineural deafness demonstrated.

### Management

Reassure and explain nature of tinnitus

Aim for symptom control/habituation, cure unlikely

Advise join support group

Tinnitus masker

Relaxation treatment

Cognitive behavioural therapy

Brief intervention re smoking and drinking

Arrange follow-up.

## Case commentary

Tinnitus is common and affects up to one in ten people at any one time.[1,2] For some people it is a significantly disabling problem. It is thought to originate from the central rather than peripheral auditory system.

The doctor needs to take a history, to ask for the results of a focused examination and to establish that the most likely cause is noise exposure earlier in the patient's life. A vestibular Schwannoma would need to be excluded if the tinnitus and deafness shown on audiometry was unilateral.

Trevor needs reassurance that there is no underlying pathology to cause concern but the doctor should not dismiss the symptoms as insignificant or tell him glibly 'Don't worry about it'. Tinnitus is a risk factor for suicide. It is important that the doctor accurately assess Trevor's psychological wellbeing and treat any associated anxiety or depression. Management focuses on ways to habituate to the noises and using hearing protection to prevent exacerbation.[3]

## References

1. Hannan, SA, Sami, F & Wareing, MJ 2005, 'Tinnitus', *British Medical Journal*, vol. 330, no. 7485, p. 237.
2. McFerran, DJ & Phillips, JS 2007, 'Tinnitus', *Journal of Laryngology & Otology*, vol. 121, no. 3, pp. 201–8.
3. Folmer, RL, Martin, WH & Shi, Y 2004, 'Tinnitus: questions to reveal the cause, answers to provide relief', *Journal of Family Practice*, vol. 53, no. 7, pp. 532–40.



# Section 8 Emergency medicine
# Case 22 Catriona Chryssides

## Instructions for the doctor

This is a short case about a new patient.
Please manage this medical emergency.

**Scenario**

Catriona Chryssides is a 29-year-old arts coordinator. You have been asked to see her as an emergency because of dizziness and palpitations on a Saturday morning.

You are doing a locum in a remote Aboriginal community. The clinic has a treatment room with emergency equipment. The nearest hospital is 300 km away and patients requiring urgent hospital care are evacuated by the RFDS plane. The specialists at the hospital provide telephone advice if needed. An Aboriginal Health Worker is also working in the clinic.

The facilitator will give you the physical examination findings and the results of initial investigations on specific request.

# Instructions for the patient Catriona Chryssides

You have just moved to the area as arts coordinator. You wanted a change of scene and to travel before your 30th birthday next month. It has been a major upheaval leaving your friends and family in the city. You are finding the work challenging and chaotic and wonder if you will ever be able to make a worthwhile contribution.

It's Saturday morning. You started the day with a strong coffee and got up to go for a walk and felt fine. Suddenly you experienced a jolt in your heart and it feels as if it has gone haywire as it is pounding rapidly. You feel dizzy, unwell, a bit nauseated and frightened. You told your housemate how you felt and she promptly drove you down to the clinic.

You have never experienced anything like this before. You have no significant past medical history.

You smoke 10 cigarettes per day but do not consume alcohol.

Before leaving the city you made sure that you were up to date with your vaccinations and Pap smear. You have an Implanon contraceptive implant fitted.

You will suddenly feel well again when the doctor gives you the second injection.

## Instructions for the facilitator

This scenario can be changed to assess the doctor's emergency skills in their own clinical setting, for example, the venue could be a small rural hospital or a suburban general practice.

The observations are:

—Temperature normal
—Pulse 180 bts per minute, regular
—BP 92/64 mm Hg.

Please show the candidate the ECG recording once the monitor is attached. Refer to Figure 4, centre insert page C. (Note: an ECG is given rather than just rhythm strip to enable the candidate to proceed with definitive treatment in the time available for the case.)

Ask the candidate for their diagnosis when they have looked at the ECG.

Sinus rhythm is restored after the second (12 mg) bolus of adenosine.

When Catriona has returned to sinus rhythm ask the candidate to outline a future management plan.

## Suggested approach to the case

### DRABC

**D**anger—ensure safety of patient and personnel, move through to treatment room

**R**esponse—patient able to say name and describe symptoms of dizziness and 'heart racing'

**A**irway—patent as patient able to talk, no evidence of airway obstruction

**B**reathing—breathing regularly, no visible restriction to lung movement, give oxygen via mask

**C**irculation—Pulse rapid
—Request Aboriginal health worker to check blood pressure
BP 92/64 mm Hg
—Put on heart monitor and continue to monitor
—ECG interpretation

Patient assessed as having supraventricular tachycardia, haemodynamically stable.

### Focused history

Current symptoms—especially chest pain (nature of pain, radiation etc), shortness of breath

Risk factors for pulmonary embolism—recent travel or recent DVT

Any previous similar episodes of dizziness and chest discomfort and their treatment

**Medication**

Nil taken

**Allergies**

Nil known.

## Treatment

Carotid sinus massage—no effect

Valsalva manoeuvre—no effect

Insert IV cannula—take blood for FBC, UEC, troponin (TFTs can be delayed), magnesium, calcium

Intravenous adenosine as bolus of 6 mg, 12 mg, plus 20 mL flush

(Note: if the candidate does not know the dose regime, it is acceptable for them to check this in a formulary)

Warning to patient of what to expect (sense of impending doom)

Returns to sinus rhythm with resolution of symptoms after second bolus.

## Further management

Finish secondary survey

Review history
—History of palpitations

Explain what happened

Assess likely precipitants—caffeine intake, current stressors

Advice re means to stop if recurs

Advise re work—unlikely to need time off

Driving—check in Austroads book

ECG when in sinus rhythm to check for delta wave of Wolf-Parkinson-White (WPW) syndrome.

### Future management

Arrange follow-up and, if recurrent, other treatments available such as medication or ablation

Health promotion—smoking cessation.



## Case commentary

This scenario tests the doctor's ability to cope with an emergency situation. A logical and calm approach is needed and the doctor should proceed through DRABC in sequence. Some doctors who trialled this care argued that assessing Danger should not be needed when working in a clinic. They made a good point but I've left it in because it reinforces the need to consider staff and patient safety when responding to an emergency, and because of the realities of weekend on-call work when reduced staffing may mean omission of checks of emergency equipment.

This case also tests a doctor's ability to work well with the Aboriginal Health Worker and give clear instructions.

The doctor is expected to recognise the pattern of the SVT on the ECG and immediately commence vagal stimulation to try to revert the rhythm. The order of pharmacological treatment is adenosine and then verapamil. If these are ineffective, telephone advice should be sought about other options such as flecainide, sotalol or disopyramide, but availability of these drugs may be a problem. Not all clinics stock adenosine and so it is acceptable for a doctor to stabilise Catriona and arrange for the RFDS to give adenosine on arrival.

DC reversion is reserved for patients who are haemodynamically unstable and requires sedation. Longer-term recurrent SVT may be treated by ablation therapy.

Once the emergency is under control, the doctor needs to consider other important aspects of care such as her fitness for work, driving, what to do if she has another episode and when she should be reviewed. Doctors are not expected to remember the detail of the DVLA book but must know to look at it for advice.

# Further reading

Delacretaz, E 2006, 'Clinical practice. Supraventricular tachycardia', *New England Journal of Medicine*, vol. 354, no. 10, pp. 1039–51.



# Case 23 Carrie Patterson

## Instructions for the doctor

This is a short case.

**Scenario**

You are driving to work along the local high street. You see a cyclist swerve across the road and fall off her bicycle. You stop your car and grab your emergency equipment and drugs.

Please manage this situation.

# Instructions for the patient Carrie Patterson

You are 28 years old and have had insulin-dependent diabetes for 15 years. You have just moved to this area for work as a barmaid. You enjoy the work but the late hours make it difficult to control your blood sugar.

You wear a medical alert bracelet on your wrist that says you are an insulin-dependent diabetic.

This morning you set off on your bike to do some shopping. You began to feel hypoglycaemic but did not have any snacks with you. One minute you were riding along, the next thing you know is that you're lying on the pavement next to your bicycle. This case begins with you lying beside your bicycle on the side of the road. A local GP comes up to you. You are able to say your name but mumble it slowly. If you are asked if you are diabetic, you can mumble 'yes'.

You will recover quickly when the doctor gives you either:

- an injection of intravenous glucose
- an injection of glucagon IM, IV or SC, or
- oral/rectal glucose.

The following information is on your medical record:

**Past medical history**
Insulin-dependent diabetes since age 13

**Medication**
Morning: Actrapid 24 u, Insulatard 48 u
Evening: Actrapid 12 u, Insulatard 12 u

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Employed as barmaid.

# Suggested approach to the case

## Primary survey

**DRABCDE**

**D**anger—check for any danger at the scene, park car safely, use passers-by to divert traffic

**R**esponse—check for any response, person able to mumble their name

**A**irway—maintenance with cervical spine protection
—Airway clear, as person able to mumble name
—Apply stiff-necked collar or manual in-line head and neck stabilisation

**B**reathing and ventilation—breathing regular and symmetrical

**C**irculation with haemorrhage control—ability to mumble name suggests brain perfusion
—No evidence of external haemorrhage

**Disability—GCS 14**
—Eye opening response—opens eyes spontaneously (4)
—Verbal response—says name, but not sure where they are and what happened (4)
—Motor response—does everything you ask (6)

**Exposure/Environmental control**
—Remove patient's clothes to enable a secondary survey, respecting their dignity at all times
—Consider ambient temperature.

## Secondary survey

### History

**AMPLE**

**A** = no allergies
**M** = insulin
**P** = past history, injuries, hospital admissions
**L** = last time ate or drank
**E** = event

Top-to-toe examination including check for medical alert bracelet

As soon as the doctor realises that the person is diabetic on insulin, they should proceed with management of possible hypoglycaemia.

### Treatment

- Glucagon IV, IM or SC—adult dosage: 1 mg, and/or
- Glucose 50% IV at 3 mL/min via large vein—adult and paediatric dosage: 20–50 mL (depending on response)

The scenario should finish with clearance from the scene and arrangement for transport to a hospital/clinic, preferably by ambulance

Full physical examination will be required in the hospital or clinic.

## Case commentary

GPs should be equipped to cope with simple medical emergencies such as hypoglycaemia.[1] In urban areas, emergency care can often be provided more quickly by paramedics; in rural and remote Australia, the GP may be required to attend minor and major incidents at any time of night or day.[2] Tight glycaemic control reduces the long-term complications of diabetes but increases the risk of hypoglycaemia.

## Common pitfalls

Carrie's public hypoglycaemic episode means that emergency care needs to be given in a public space. However, the doctor needs to distinguish carefully between emergency care and routine ongoing care. The latter should be given by Carrie's GP of choice and in the privacy of the consulting room, and will include finding out reasons for the hypoglycaemic episode,[3] assessing her fitness to drive[4] and work.

# References

1. Baird, A 2008, 'Emergency drugs in general practice', *Australian Family Physician*, vol. 37, no. 7, pp. 541–7.
2. Johnston, CL, Coulthard, MG & Schluter, P et al. 2001, 'Medical emergencies in general practice in south-east Queensland: prevalence and practice preparedness', *Medical Journal of Australia*, vol. 175, no. 2, pp. 99–103.
3. Koch, B 2006, 'Selected topics of hypoglycemia care', *Canadian Family Physician*, vol. 52, pp. 466–71.
4. Diamond, TH, Collins, J & Rohl, P 2005, 'Motor vehicle accidents during episodes of hypoglycaemia—case reports and lessons to be learnt', *Australian Family Physician*, vol. 34, no. 3, pp. 151–4.



# Section 9 Endocrinology
# Case 24 Tim Mitchell

## Instructions for the doctor

This is a long case.

Please see Tim for his annual diabetes check.

**Scenario**

A 52-year-old politician, Tim Mitchell, has booked a long appointment for his annual diabetic review. He was diagnosed with diabetes two years ago and has no known complications. He had routine blood tests two weeks ago. You plan to discuss the results at this visit.

The following information is on his summary sheet:

**Past medical history**
Type 2 diabetes mellitus for two years

**Medication**
Nil

**Social history**
Member of Parliament
Wife—hospital administrator
Non-smoker
Alcohol intake—30 standard drinks per week recorded in 2006

**Test results**
TFTs—normal
LFTs—normal
UEC—normal
ACR < 2.5
HbA1c 8.4% (HbA1c six months ago was 7.2%)

| Chol mmol/L | Trig mmol/L | HDL-C mmol/L | LDL-C mmol/L | Ratio |
|---|---|---|---|---|
| (< 5.5) | (< 2.0) | (> 1.1) | (< 3.4) | |
| 5.7 | 1.8 | 1.7 | 3.2 | 3.4 |

National Heart Foundation Lipid Targets:
Chol < 4.0 Trig < 2.0 HDL Chol > 1.0 LDL Chol < 2.5
Coronary Risk Ratio Ref Values: Average = 4.4 Twice Average = 7.0

# Instructions for the patient Tim Mitchell

You lead a busy life as a politician. Discovering that you were diabetic was a real shock, particularly as it was when you were opening a new clinic and volunteered to have a blood check done.

At first you were great with the diet and checked your own blood sugar but for the last few months your political party has been down in the polls. This has meant less time for exercise and more time on the road and eating out at party events.

You have booked the appointment to check your diabetes today and are quite ready to be told that you need to do more to keep things under control.

## Clinical examination findings

Height 1.8 m

Weight 93.9 kg

BMI 29 kg/m$^2$

Waist circumference 102 cm

BP 128/76 mm Hg

Cardiovascular examination—all normal

Eyes, feet—all normal

Peripheral pulses—all normal.

The following information is on your medical record:

**Past medical history**
Type 2 diabetes mellitus for two years

**Medication**
Nil

**Social history**
Member of Parliament
Wife—hospital administrator
Non-smoker
Alcohol intake—30 standard drinks per week recorded in 2006

**Test results**
FBC—normal
TFTs—normal

UEC—normal
ACR < 2.5
HbA1c 8.4% (HbA1c six months previously was 7.2%)

| Chol mmol/L | Trig mmol/L | HDL-C mmol/L | LDL-C mmol/L | Ratio |
|---|---|---|---|---|
| (< 5.5) | (< 2.0) | (> 1.1) | (< 3.4) | |
| 5.7 | 1.8 | 1.7 | 3.2 | 3.4 |

National Heart Foundation Lipid Targets:
Chol < 4.0 Trig < 2.0 HDL Chol > 1.0 LDL Chol < 2.5
Coronary Risk Ratio Ref Values: Average = 4.4 Twice Average = 7.0

LFTs:

| Bili µmol/L | ALP U/L | GGT U/L | ALT U/L | ALB g/L | TP g/L |
|---|---|---|---|---|---|
| (< 16) | (30–115) | (< 36) | (< 36) | (38–50) | (65–85) |
| 6 | 100 | 113 | 17 | 48 | 70 |

# Suggested approach to the case

Establish rapport

Open-ended questions to explore Tim's ideas, concerns and expectations about his diabetes and this consultation.

## Specific questions

Systematic approach to acute and chronic symptoms/complications
- —Energy level
- —Thirst, urinary frequency
- —Recurrent infections
- —Chest pain, shortness of breath
- —Change in visual acuity
- —Sexual function

Results of home monitoring

Review of diet

Review of risk factors

Request permission to examine.

## Examination

BMI

Waist circumference

BP

Consider cardiovascular examination if symptomatic

Need for eye check, foot check annually

Check for peripheral pulses.

## Investigations

Nil extra needed at present.

## Management

Demonstrate patient-centred approach to giving information

Summarise and explain findings: overweight, increased abdominal girth, raised HbA1c and cholesterol, raised GGT, high alcohol intake

Explore Tim's ideas on why control is poor and cholesterol is elevated

Discuss diet and exercise, being considerate of lifestyle of patient and willingness to change

Refer for optometry

Consider referral for nutrition advice, diabetes education, podiatry

Support organisations such as Diabetes Australia

Offer GP Management Plan and Team Care Arrangements to access rebate on above referrals

Discuss alcohol consumption

Drug therapy—will be indicated if HbA1c or cholesterol still raised next follow-up appointment.

### Practice issues

Follow-up plans and recall list

Claim Service Incentive Payment (if in an accredited practice) for diabetes care once full cycle of care completed.

### Extras for this case

Cover whether any allergies

Immunisation—recommend vaccination against influenza and pneumococcal infection.

## Case commentary

Diabetes is a disease with multiple potential complications. A systematic approach is needed to ensure that all issues are discussed. A good doctor will be able to do this within a patient-centred framework. For example, the consultation would start with a general question about how Tim is and how life is going followed by exploring Tim's current concerns about his diabetes. Tim's concerns will be addressed first and then any issues noted by the doctor can be addressed. Tim is much more likely to listen to advice and implement change if he has identified the area of concern. Hearing about Tim's lifestyle first will enable the doctor to ensure the advice is feasible and appropriate.

Diabetes care is increasingly performed by different disciplines. The degree to which care is shared among professionals will vary. What does not change is the GP's responsibility to ensure that this care is being done and to provide it if necessary. All GPs need to be able to screen for diabetic retinopathy and peripheral neuropathy, although this screening is often delegated to an optometrist and podiatrist respectively.

The last aspects of the case are organisational. A Service Incentive Payment can be claimed from Medicare if a full cycle of diabetes care is complete. A good doctor will also ask Tim if he consents to be on the practice recall system for diabetes.

## Further reading

Diabetes Australia & Royal Australian College of General Practitioners 2009, *Diabetes management in general practice: guidelines for Type 2 diabetes*, www.racgp.org.au/diabetes/pdf, accessed 25 June 2010.



# Case 25 Veronica Richards

## Instructions for the doctor

This is a short case.

Please take a focused history from Veronica. Then ask the facilitator for the results of a relevant clinical examination and initial investigations.

Outline the diagnosis and your management plan to Veronica.

**Scenario**

Veronica Richards is 49 years old and has two teenage children. She grew up in the Philippines and has lived in Australia for the last 30 years. She comes to you complaining of tiredness.

**Past medical history**
Two normal deliveries

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Housewife, trained as a teacher
Non-smoker, teetotal.

# Instructions for the patient Veronica Richards

You are 49 years old. You grew up in the Philippines and trained as a teacher. You have been in Australia for the past 30 years. You have two teenage children and are happily married. You are not depressed.

You have decided to see the doctor because of your tiredness. You sleep well but don't have the energy you used to have. You have noticed the tiredness for about two months and it is getting worse.

Your periods are regular, not particularly heavy and you have no menopausal symptoms.

You eat a balanced diet, including red meat two or three times a week, and take your dog for a walk every day. You have put on a few kilos in the past year. You have no night sweats or changes to your thirst, urine or bowel symptoms.

The following information is on your medical record:

**Past medical history**
Two normal deliveries

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Housewife, trained as a teacher
Non-smoker, teetotal.

# Instructions for the facilitator

Please give to the doctor on specific request:

## Examination

Hydration good, no cyanosis, anaemia or jaundice

Weight 70.8 kg

Height 1.62 m

BMI 27 kg/m$^2$

Pulse 66 reg

BP 130/82 mm Hg

No thyroid enlargement

No thyroid eye signs

Chest clear

Heart sounds normal

Abdomen soft, no masses, no organomegaly, pr no masses, no blood/mucous, haemoccult negative

Neurology—grossly normal, reflexes slow

Urine dipstick—negative.

## Investigations

FBE, ESR or CRP—normal

UEC including calcium and magnesium—normal

LFTs—normal

Fasting blood sugar—normal

Urine for MC and S—normal

Iron studies—normal

| | |
|---|---|
| TSH | 42.80 (0.3–4.0 mU/L)* |
| Antithyroid peroxidase | 345 IU/mL (< 61)* |
| Antithyroglobulin | 93 IU/mL (< 61)* |
| Free $T_4$ | 8 p mol/L. |

## Suggested approach to the case

Establish rapport

### History

Tiredness—character, duration

Exclude common causes:

- —Anaemia—diet, occult bleeding, heavy periods
- —Diabetes—XS thirst, polyuria, nocturia
- —Menopause—skin changes, regularity of periods, flushing, sweats
- —Psychological—mood, affect, sleep, enjoyment of/satisfaction with life, relationships, stress
- —Thyroid—weight gain, skin changes
- —Occult malignancy—weight loss, cough, haemoptysis, date of last Pap smear, mammogram, bowel changes, family history

Lifestyle factors:

- —Ask about exercise, smoking, alcohol, drug use

Assess impact of tiredness on her, what treatments has she tried

Request permission to examine.

### Examination

Hydration good, no cyanosis, anaemia or jaundice

Height 1.62 m

Weight 70.8 kg

BMI 27 $kg/m^2$

Pulse 66 reg

BP 130/82 mm Hg

No thyroid enlargement

No thyroid eye signs

Chest clear

Heart sounds normal

Abdomen soft, no masses no organomegaly, pr no masses, no blood/mucous, haemoccult negative

Neurology—grossly normal, reflexes slow

Urine dipstick—negative.

### Investigations

FBE, ESR or CRP, UEC including calcium and magnesium, LFTs, Fasting blood sugar, Urine for MC and S, Iron studies

| | |
|---|---|
| TSH | 42.80 (0.3–4.0 mU/L)* |
| Antithyroid peroxidase | 345 IU/mL (< 61)* |
| Antithyroglobulin | 93 IU/mL (< 61)* |
| Free $T_4$ | 8 p mol/L. |

### Diagnosis

Hypothyroidism—auto-immune.

### Management

Explain condition

Commence thyroxine

Need for regular blood tests and follow-up.



## Case commentary

Tiredness is a common problem in general practice for which doctors need a system for assessment. This should be a stepped approach focusing on the common causes initially.[1] Australian research shows that testing is high[2] and few (3%) of patients have a significant clinical diagnosis based on an abnormal pathology test.[3] More elaborate tests risk false positives.[4]

Veronica has hypothyroidism. The doctor should explain that this is a common problem and can be treated with replacement thyroxine. Veronica will need ongoing follow up to ensure that correct dose is given. The most common cause of hypothyroidism in Australia is autoimmune chronic lymphocytic thyroiditis, characterised by raised circulating levels of thyroid peroxidase antibody.[5]



## Common pitfalls

The doctor should avoid prematurely attributing the tiredness to Veronica's 'time of life'. Equally it is realistic to tell patients that the chance of finding treatable cause is low. This lays the foundation for taking a holistic approach to address psychological issues,[6] work/life balance and expectations, sleep, diet and exercise.[7]

# References


1. Murtagh, J 2003, 'Fatigue: a general diagnostic approach', *Australian Family Physician*, vol. 32, no. 11, pp. 873–6.
2. Harrison, M 2008, 'Pathology testing in the tired patient: a rational approach', *Australian Family Physician*, vol. 37, no. 11, pp. 908–10.
3. Gialamas, A, Beilby, J & Pratt, NL et al. 2003, 'Investigating tiredness in Australian general practice. Do pathology tests help in diagnosis?', *Australian Family Physician*, vol. 32, no. 8, pp. 663–6.
4. Koch, H & van Bokhoven, MA et al. 2009, 'Ordering blood tests for patients with unexplained fatigue in general practice: what does it yield? Results of the VAMPIRE trial', *British Journal of General Practice*, vol. 59, no. 561, pp. e93–100.
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6. Dick, ML & Sundin, J 2003, 'Psychological and psychiatric causes of fatigue. Assessment and management', *Australian Family Physician*, vol. 32, no. 11, pp. 877–81.
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# Section 10 Evidence-based medicine

## Case 26 Viva—The treatment of sore throats with antibiotics

### Instructions for the doctor

This is a short case.

Please read the following abstract from a Cochrane Systematic Review on the treatment of sore throats. The examiner will ask you questions about this article and evidence-based medicine.

### Antibiotics for sore throat[1]

**Background:** Sore throat is a very common reason for people to present for medical care. Although it remits spontaneously, primary care doctors commonly prescribe antibiotics for it.

**Objectives:** To assess the benefits of antibiotics for sore throat.

**Search strategy:** We searched the Cochrane Central Register of Controlled Trials (CENTRAL) and the Database of Abstracts of Reviews of Effects (DARE) (The Cochrane Library, Issue 1, 2006), MEDLINE (January 1966 to March 2006) and EMBASE (January 1990 to December 2005).

**Selection criteria:** Trials of antibiotic against control with either measures of the typical symptoms (throat soreness, headache or fever), or suppurative or non-suppurative complications of sore throat.

**Data collection and analysis:** Potential studies were screened independently by two authors for inclusion, with differences in opinion resolved by discussion. Data were then independently extracted from studies selected by inclusion by two authors. Researchers from three studies were contacted for additional information.

**Main results:** There were 27 studies with 2835 cases of sore throat.

1. **Non-suppurative complications:** There was a trend for antibiotics to protect against acute glomerulonephritis, but there were insufficient cases to be sure. Several studies found antibiotics reduced acute rheumatic fever by more than two-thirds (relative risk (RR) 0.22; 95% confidence interval (CI) 0.02 to 2.08).
2. **Suppurative complications:** Antibiotics reduced the incidence of acute otitis media (RR 0.30; 95% CI 0.15 to 0.58); of acute sinusitis (RR 0.48; 95% CI 0.08 to 2.76); and of quinsy (peritonsillar abscess) compared to those taking placebo (RR 0.15; 95% CI 0.05 to 0.47).
3. **Symptoms:** Throat soreness and fever were reduced by antibiotics by about one half. The greatest difference was seen at about 3 to 4 days (when the symptoms of about 50% of untreated patients had settled). By one week about 90% of treated and untreated patients were symptom-free. The overall number needed to treat to prevent one sore throat at day 3 was just under six (95% CI 4.9 to 7.0); at week 1 it was 21 (95% CI 13.2 to 47.9). Subgroup analyses of symptom reduction: Analysis by: age; blind versus unblinded; or use of antipyretics, found no significant differences. Analysis of results of throat swabs showed that antibiotics were more effective against symptoms at day 3, RR 0.58 (95% CI 0.48 to 0.71) if the swabs were positive for Streptococcus, compared to RR 0.78 (95% CI 0.63 to 0.97) if negative. Similarly at week 1, RRs 0.29 (95% CI 0.12 to 0.70) for positive, and 0.73 (95% CI 0.50 to 1.07) for negative swabs.

**Authors' conclusions:** Antibiotics confer relative benefits in the treatment of sore throat. However, the absolute benefits are modest. Protecting sore throat sufferers against suppurative and non-suppurative complications in modern Western society can only be achieved by treating many with antibiotics, most of whom will derive no benefit. In emerging economies (where rates of acute rheumatic fever are high, for example), the number needed to treat may be much lower for antibiotics to be considered effective. Antibiotics shorten the duration of symptoms by about 16 hours overall.

## Instructions for the facilitator

This case tests the candidate's ability to understand, explain and apply the information available in a research abstract.

Please ask the candidate the following questions and keep an eye on the timer to ensure you ask all the questions.

1. What is the aim of this research?
2. Why is information from a systematic review considered to be the highest level of evidence?
3. How many patients with sore throat need to be treated with antibiotics to prevent one sore throat at day 3, and at day 7? Why is the number different at the two dates?
4. On the basis of this information, how would you plan to treat the following who present with a sore throat:
   a. An otherwise healthy eight-year-old Caucasian girl
   b. A 13-year-old Indigenous boy living in a remote community?
5. Why is the number needed to treat more useful in clinical practice than relative risk reduction?

## Suggested answers

1. *What is the aim of this research?*
   This research aims to quantify the impact of antibiotics on the symptoms and complications of sore throats.
2. *Why is information from a systematic review considered to be the highest level of evidence?*
   The Centre for Evidence-based Medicine in Oxford defines a systematic review as: 'A summary of the medical literature that uses explicit methods to perform a thorough literature search and critical appraisal of individual studies and that uses appropriate statistical techniques to combine these valid studies.'[2]
3. *How many patients with sore throat need to be treated with antibiotics to prevent one sore throat at day 3, and at day 7? Why is the number different at the two dates?*
   Just under 6 and 21, respectively. The numbers are different because at one week most people were better anyway and so the reduction due to the antibiotic was comparatively less.
4. *On the basis of this information, how would you plan to treat the following who present with a sore throat:*

a. An otherwise healthy eight-year-old Caucasian girl—no antibioitics, because of her low background risk of suppurative and non-suppurative complications.
b. A 13-year-old Indigenous boy living in a remote community—treat with antibiotics, because of the high background risk of both suppurative and non-suppurative complications.

5. *Why is the number needed to treat more useful in clinical practice than relative risk reduction?*
   - *Relative risk* is the ratio of the risk of disease or death among the treated to the risk among the untreated.
   - *Absolute risk* is the observed or calculated probability of an event in a population under study, in contrast to the relative risk.
   - *Number needed to treat* is the number of people that you would need to treat with a specific intervention over a given period of time in order for one person to benefit in the outcome of interest.[3]

The number needed to treat is based on the absolute risk reduction and takes into account how likely something is to occur in the population being studied. A relative risk reduction can sound impressive as it just compares the rate of an outcome in those treated compared with those not treated.

An example that I use in teaching is the lottery. Imagine a person buys one lottery ticket. But they realise that the chances of winning are very low and so they decide to buy another ticket. By buying the second ticket they have doubled their risk (or chance) of winning—that is, their relative risk has doubled. However, their absolute risk of winning is still very low because the background risk of winning is so low. This makes the number needed to treat (or win) very high. To be sure of winning the lottery you need to buy an awful lot of tickets.

To go back to therapeutics and sore throats, how likely something is to happen—and how important that event is—similarly affects whether treatment is worthwhile. In healthy Western populations, complications of sore throat are rare. Many people need to be treated to prevent these rare complications so it is difficult to justify treatment with antibiotics; but in people with a high risk of serious complications, treatment is worthwhile. They have a higher background risk and so the absolute risk reduction is higher, even though the relative risk reduction is the same. The number needed to treat is the reciprocal of the absolute risk reduction. The high absolute risk reduction of serious complications achieved by treating those at high risk, creates a low number needed to treat.

## Case commentary

This case tests the doctor's ability to appraise an abstract and then apply the information to the care of individual patients. General practitioners are not all expected to conduct research but all should be able to read research information and apply it to their practice. Neither are exam candidates expected to be walking dictionaries! A doctor's answer should demonstrate the principles of evidence-based medicine but are likely to take many more words to express than the dictionary definitions given here.

An understanding of relative risk, absolute risk and numbers needed to treat is invaluable when assessing the material produced by pharmaceutical companies. The next challenge is explaining these principles to patients so that they understand that a reluctance to prescribe can be good medicine, not laziness. Using the lottery as an everyday example of risk can be helpful.

# References

1. Del Mar, CB, Glasziou, PP & Spinks, AB 2006, 'Antibiotics for sore throat', *Cochrane database of systematic reviews*, no. 4, p. CD000023.
2. *Oxford Centre for Evidence-based Medicine*, Bandolier, Oxford.
3. National Prescribing Service 2002, 'Making sense of evidence-based jargon', *NPS News*, p. 25.

# Further reading

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McAlister, FA, Straus, SE & Guyatt, GH et al. 2000, 'Users guides to the medical literature: XX. Integrating research evidence with the care of the individual patient: Evidence-based Medicine Working Group', *Journal of the American Medical Association*, vol. 283, no. 21, pp. 2829–36.



# Section 11 Eyes
# Case 27 Edward Galloway

## Instructions for the doctor

This is a short case.

Please take a history from Edward, examine him and tell him the most likely diagnosis and your recommended management.

**Scenario**

Edward Galloway is a 66-year-old retired fireman. He spends much of his time fishing and playing golf and he has noticed increased watering of both eyes as soon as he goes outside. He finds this frustrating and embarrassing and is thinking of stopping golf as sometimes it is so hard to see the ball.

He has decided to come to his usual GP for help.

**Past medical history**
Trans-urethral resection of the prostate two years ago
Skin graft following extensive burn to left lower leg in a fire 10 years ago

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Both parents died in their mid 80s
Mother had glaucoma

**Social history**
Retired fireman
Non-smoker, alcohol consumption unknown.

# Instructions for the patient Edward Galloway

You are a 66-year-old retired fireman. You spend much of your time fishing and playing golf and have noticed increased watering of both eyes as soon as you go outside. You find this frustrating and embarrassing and are thinking of stopping golf as sometimes it is so hard to see the ball.

You decide to see your usual GP for help.

In the latter part of her life your mother was partially sighted due to glaucoma. You have heard that this runs in the family and are worried that this is what's causing the watering. You will only admit to this if the doctor is sensitive and empathic in their approach to you.

You have difficulty seeing at times because of the watering but your vision is 6/6 bilaterally when you wear your glasses.

The following information is on your medical record:

**Past medical history**
Trans-urethral resection of the prostate two years ago
Skin graft following extensive burn to left lower leg in a fire 10 years ago

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Both parents died in their mid 80s
Mother had glaucoma

**Social history**
Retired fireman
Non-smoker, alcohol consumption unknown.

## Suggested approach to the case

Introduction

Establish rapport

Open questions to allow Edward to tell his story.

### Specific questions

Eyes watering—timing

Any discharge, eyes sticky or gritty in the morning

Exclude pain or visual disturbance

Treatments tried so far

Date of most recent optometry checkup—including screening for glaucoma

Confirm not on any medication, check OTC medications, e.g. decongestants

Request permission to examine.

### Examination

Visual acuity and fields to confrontation

Conjunctivae and sclerae

Pupil size, shape and reaction to light

Fluoroscein stain –need to ask to do but not expected to perform in the time available

Fundoscopy—need to ask to do but not expected to perform in the time available

All findings normal apart from mild conjunctival infection both eyes.

### Most likely diagnosis

Dry eyes—age-related.

### Management

Explain dry eyes[1]

Reassure unlikely to be glaucoma but still needs regular checks for it

Recommend at least annual optometrist visit

Recommend
—Blink more
—Trial humidifers

—Regular use of tear ointment at night and drops during the day
—Bathing of eyelid margins to encourage flow of oily tears
—Arrange follow-up
—Further treatment can be offered, e.g. tetracyclines, punctal plugs.[2]

## Case commentary

Dry eyes are a common problem in the elderly that can readily be diagnosed and treated in general practice. The GP will be able to get Edward back to regular golf and reassure him that these symptoms do not indicate that he is getting glaucoma. However, Edward will require regular optometry checks on his pressure and visual fields.

As people age, less oily tears are produced. This reduced lubrication is felt particularly when outside, in arid areas and in air-conditioned rooms. The surface of the eye senses the dryness and reflex tearing (watery tears) occurs. The treatment is aimed at optimising the production of oily tears by bathing the eyelids, clearing any duct blockages and replacing the oily tears with artificial tears.

It is counter-intuitive to offer artificial tears to someone with watery eyes but is a simple way of improving someone's quality of life.

## Common pitfalls

Edward reports that he sometimes cannot see when he is playing golf. It is easy to assume that this is a problem with his visual acuity when in fact it is just that the excess watery tears reduce his vision. Careful questioning and assessment of visual acuity is needed to clarify the problem.

# References

1. Hodge, C & Sutton, G 2003, 'Dry eyes. Eye series. 3', *Australian Family Physician*, vol. 32, no. 4, pp. 265–6.
2. Lemp, MA 2008, 'Advances in understanding and managing dry eye disease', *American Journal of Ophthalmology*, vol. 146, no. 3, pp. 350–6.

# Case 28 Henrik Schneider

## Instructions for the doctor

This is a short case.

Please take a focused history from Henrik and look at a photograph of his eyes. Refer to Figures 5 and 6, centre insert page D. Please describe the eye signs on the photograph to the facilitator. You can ask the facilitator for other examination findings. You are expected to tell Henrik the most likely diagnosis and outline your initial management.

**Scenario**

You are working as a GP locum at a well-equipped clinic five hours drive away from the nearest base hospital. An Austrian tourist Henrik Schneider, aged 25, telephones you at 6.30 am saying he needs an urgent consultation for his painful, red right eye and you agree to see him. He is leaving in an hour for the town where the base hospital is located.

Henrik does not take any medication, has no known allergies and no significant past medical history.

# Instructions for the patient Henrik Schneider

You are a 25-year-old student backpacking around Australia. Yesterday your right eye became painful, the vision was a bit blurred and the eye looked red when you looked in the mirror at the hostel. You thought it might be due to your contact lenses, and so started to wear your glasses.

This morning you are due to travel five hours in a coach to the nearest town with a hospital. However, your eye is now more painful and the vision more blurred so you decide to see the resident GP as soon as possible. Bright lights make the eye more painful.

You have not had this eye problem before and have not injured the eye or got anything in it.

You do not take any medication, have no known allergies and have no significant past medical history.

# Instructions for the facilitator

### Clinical examination findings

When the doctor asks to examine the eye, please show them the photographs Refer to Figures 5 and 6, centre insert page D.

Visual acuity:
—Left eye 6/12 uncorrected, 6/6 corrected through pinhole
—Right eye 6/18 uncorrected, 6/18 corrected through pinhole.

# Suggested approach to the case

Establish rapport

Open-ended questions to explore Henrik's ideas, concerns and expectations.

### Specific questions

Pain

Vision

Redness

Photophobia

Exclude pus-like discharge

Exclude itching

Exclude foreign body or eye injury

Confirm normally wears contact lenses

Previous history of eye problems

Request permission to examine.

### Examination

Visual acuity:
—Left eye 6/12 uncorrected, 6/6 corrected through pinhole
—Right eye 6/18 uncorrected, 6/18 corrected through pinhole

Observe photograph
—Anterior chamber clear

—Cornea—no fluorescein uptake (excludes dendritic ulcer or corneal abrasion secondary to extruded foreign body or contact lens problem)
—Pupil size and reactions to light—pupil smaller on right and irregular, and bright light uncomfortable
—No hypopyon
—Distribution of erythema—circumcorneal

Check for foreign body.

### Most likely diagnosis

Iritis of right eye.

### Management

Explain condition

Discuss with ophthalmologist at base hospital and arrange referral and review

Commence topical steroids if available

Not to wear contact lenses today.



## Case commentary

'Beware the unilateral red eye.' Most common eye problems in general practice affect both eyes so the history of a unilateral red eye is significant. Henrik also has the three sentinel warning signs of pain, photophobia and blurred vision.[1] The doctor should ask about a history of a foreign body or eye injury. Contact lenses increase the risk of corneal ulcers, which can become infected.

A pinhole creates a very narrow light path that requires little focusing prior to hitting the retina and so demonstrates the potential corrected visual acuity. Henrik's reduced vision in the right eye is not corrected by using a pinhole. This shows the loss of vision in the right eye is not due to a refractive error so the doctor must look carefully for an ocular problem.

Starting topical steroids in the eye is potentially dangerous and it is essential that the doctor excludes a herpetic cause of the problem before commencing treatment, specifically by looking for a dendritic ulcer on fluorescein staining. If possible discuss the case with a specialist ophthalmologist. However, the distance between the patient and the base hospital means that the GP needs to start steroids to prevent further exacerbation of the iritis.

# Reference

1. Statham, MO, Sharma, A & Pane, AR 2008, 'Misdiagnosis of acute eye diseases by primary health care providers: incidence and implications', *Medical Journal of Australia*, vol. 189, no. 7, pp. 402–4.

# Further reading

Leibowitz, HM 2000, 'The red eye', *New England Journal of Medicine*, vol. 343, no. 5, pp. 345–51.

Manolopoulos, J 2002, 'Emergency primary eye care. Tips for diagnosis and acute management', *Australian Family Physician*, vol. 31, no. 3, pp. 233–7.



# Section 12 Gastroenterology
# Case 29 Jenna Banks

## Instructions for the doctor

This is a short case.

Please take a history from Jenna and then ask the facilitator for the results of a focused examination. Tell Jenna the most likely diagnosis and your initial management plan.

**Scenario**

Jenna Banks is a 25-year-old tax manager studying for her Chartered Accountancy exams. You last saw her for contraception. She is coming to see you today because of recurrent abdominal pain and bloating.

The following information is on her summary sheet:

**Past medical history**
# Left humerus aged 8, from a rollerblading accident

**Medication**
On Brenda 35 ED contraceptive pill
(cyprotesone acetate 2 mg, ethinyloestradiol 35 mg)

**Allergies**
Nil known

**Immunisations**
Up to date

**Pap smear**
Normal last year

**Family history**
Parents both alive and well

**Social history**
Non-smoker
Alcohol—2 standard drinks on two occasions per week.

# Instructions for the patient Jenna Banks

You are a 25-year-old tax manager studying for your Chartered Accountancy exams. For the last few months you have experienced intermittent bouts of abdominal pain, bloating and flatus. The pain can be so severe that you need to lie down but often you can continue at work. The pain comes on at any time and is a squeezing, cramp-like pain, usually in the left or right side of your abdomen. The pain is sometimes relieved by defaecating.

You have not lost weight, been nauseated or vomited. Your bowel habit alternates between constipation and passing hard, rabbit-like pellets, to diarrhoea. You do not pass any blood or mucus rectally. You have tried some herbal remedies and cutting out dairy and gluten from your diet but without success.

You want the doctor to make sure that you have nothing seriously wrong with you and to tell you what the problem is.

**Past medical history**
# Left humerus aged 8, from a rollerblading accident

**Medication**
On Brenda 35 ED contraceptive pill
(cyprotesone acetate 2 mg, ethinyloestradiol 35 mg)

**Allergies**
Nil known

**Immunisations**
Up to date

**Pap smear**
Normal last year

**Family history**
Parents both alive and well

**Social history**
Non-smoker
Alcohol—2 standard drinks on two occasions per week.

## Instructions for the facilitator

All physical examination findings are normal. Please give the following clinical examination findings on specific request:

- Temp, pulse, BP all normal
- Overall impression of health
- No hand or nail changes
- No jaundice or anaemia
- Abdominal examination; no tenderness, no masses, normal rectal examination.

## Suggested approach to the case

Establish rapport

Open questions to explore Jenna's ideas, concerns and expectations.

### Specific questions

Pain

Bowel habit

Bloating

Exclude blood or mucus pr

Wind

Exclude change in symptoms if changes diet, e.g. lactose, gluten products

Exclude other systemic upset, weight loss, check periods are regular

Check current medication use

Determine impact of symptoms on Jenna's life and impact of stress on symptoms

Request permission to examine.

### Examination

Hands, face, mouth—normal

Abdominal and rectal examination—normal.

### Most likely diagnosis

Irritable bowel syndrome.

### Management

Provide explanation of the condition and reassurance

Investigations: FBE, ESR, coeliac serology (if diarrhoea predominates)

Suggestions for symptomatic management:
- —Modify diet—fibre content
- —Reduce volume of carbonated drinks
- —Medication—antispasmodics, bulking agents, anticholinergics
- —Cognitive behaviour therapy, stress reduction

Referral—not needed initially

Follow-up.

## Case commentary

Irritable bowel syndrome (IBS) is a common problem that accounts for 0.3 per 100 patient presentations in Australian general practice[1] and has a worldwide prevalence of 10–15%.[2] IBS is diagnosed on clinical features and a minimum of investigations.[3] The candidate should enable Jenna to tell her story about the symptoms, and check that there are no alarm symptoms, such as weight loss, vomiting or rectal bleeding. The examination should focus only on a check of the hands, the face and the abdomen.

Referral to a gastroenterologist is unnecessary at this stage. GPs can make the diagnosis mainly on clinical grounds, explain the condition and recommend initial symptomatic treatment. A full blood count and ESR or CRP should be done to exclude anaemia or inflammation; antiendomysial and antigliadin antibodies for coeliac disease should be performed if the diarrhoea predominates.

IBS involves the 'brain-gut axis' but the exact cause and effect are unclear. A staged approach to management is recommended. A modified exclusion diet and stepwise reintroduction of foods or trials of eliminating classes of food may be useful.[4] Fibre, antispasmodics and peppermint oil were all found to be more effective than the placebo in one study.[5] Antidepressants and psychological therapies can be effective in the treatment of IBS.[6]

A poor candidate may initiate a large number of investigations or suggest early referral to a gastroenterologist.

# References

1. Charles, J & Harrison, C 2006, 'Irritable bowel syndrome in Australian general practice', *Australian Family Physician*, vol. 35, no. 11, pp. 840–1.
2. Mayer, EA 2008, 'Clinical practice. Irritable bowel syndrome', *New England Journal of Medicine*, vol. 358, no. 16, pp. 1692–9.
3. Bolin, TD 2005, 'Irritable bowel syndrome', *Australian Family Physician*, vol. 34, no. 4, pp. 221–4.
4. Heizer, WD, Southern, S & McGovern, S 2009, 'The role of diet in symptoms of irritable bowel syndrome in adults: a narrative review', *Journal of the American Dietetic Association*, vol. 109, no. 7, pp. 1204–14.
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6. Ford, AC, Talley, NJ & Schoenfeld, PS et al. 2009, 'Efficacy of antidepressants and psychological therapies in irritable bowel syndrome: systematic review and meta-analysis', *Gut*, vol. 58, no. 3, pp. 367–78.



# Case 30 Enrico Castallani

## Instructions for the doctor

This is a long case.

Please take a history, conduct an appropriate examination and then outline your management plan to Mr Castallani.

**Scenario**

Enrico Castallani is the licensee of the local hotel. He rarely comes to the surgery although you know that he has been in town for over two years now. Today he has asked for an urgent appointment because of bad abdominal pain. You agree to see him and note the following information on his medical records.

**Past medical history**
MVA 2005—sustained no injuries, cause of accident unclear

**Medications**
Nil recorded

**Allergies**
Nil known

**Immunisations**
Nil known

**Social history**
Local hotelier
Lives with de facto partner.

# Instructions for the patient Enrico Castallani

You have been the licensee of a hotel for the last two years. You rarely see the doctor. Today you have asked for an urgent appointment because of bad abdominal pain.

You have a long-term drinking problem. Both your parents were alcoholic and although you saw the impact of alcohol on them, you started drinking at a young age. You have had a series of jobs working in the hospitality industry. You left your last job in a hurry as you had an MVA while drunk. The police were never able to establish a cause but you left the town to escape suspicion.

For the past few months you have switched to drinking port rather than wine. You have about a cask a day.

For the last 24 hours you have experienced constant severe abdominal pain, which radiates through to your back. The pain has been so bad that you can't walk or work. You have come today because your partner has persuaded you. You have been vomiting and are off your food. You are sweating and feel generally weak.

You have not vomited blood and have no symptoms or signs of liver failure. You are very sensitive about your alcohol problem and will only open up about this if the doctor approaches the issue in a non-judgmental manner.

The following information is on your medical record:

**Past medical history**
MVA 2005—sustained no injuries, cause of accident unclear

**Medication**
Nil recorded

**Allergies**
Nil known

**Immunisations**
Nil known

**Social history**
Local hotelier
Lives with de facto partner.

# Instructions for the facilitator

This is a case of acute pancreatitis. Please give the candidate the following examination findings on specific request.

### Clinical examination findings

Temperature 38.0°C

Pulse 110

BP 116/80 mm Hg

Abdomen—rigid with tenderness maximal in periumbilical region.

# Suggested approach to the case

Establish rapport

Open questions about abdominal pain.

### Specific questions

Nature of pain, and radiation to back

Absence of haematemesis

Vomiting and nausea—present

Absence of melaena or blood in stool or change in bowel habit

Absence of symptoms of liver disease—no jaundice

Absence of symptoms of gallstones

Explore alcohol consumption and motivation for change—negotiate a follow-up plan

Discuss need for overall health check at some stage

Request permission to examine.

### Examination

Temperature 38.0°C

BP 116/80 mm Hg

Pulse 110

Height 1.78 m

Weight 92 kg

BMI 29 kg/m$^2$

Examination of abdomen
- —Severe abdominal pain with guarding, rebound and rigidity
- —Pain hypogastrium
- —Absence of ascites, hepatomegaly
- —Bowel sounds—reduced

Lungs clear

BSL 4.5 mmol/L

Urine—NAD.

### Management

Arrange analgesia

Nil by mouth

Admission to hospital—transfer by ambulance essential

Commence intravenous fluids

Give oxygen

Explain to patient procedure for admission and rationale

Explore social impact of admission—who will run the pub?



## Case commentary

The doctor is expected to make the provisional diagnosis of pancreatitis and arrange for urgent admission to hospital via ambulance. A useful acronym for possible causes of pancreatitis is **GET SMASHED**:[1]

**G**allstones
**E**thanol
**T**rauma
**S**teroids
**M**umps
**A**uto-immune
**S**corpion venom
**H**yperlipidaemia
**E**RCP
**D**rugs, e.g. azathioprine

A good doctor will establish rapport with Mr Castallani and explore his alcohol consumption in a non-judgmental manner. The **CAGE** questionnaire is a useful tool for diagnosing alcoholism. The questions focus on **C**utting down, **A**nnoyance by criticism, **G**uilty feeling, and **E**ye-openers.[2] Arrangements for another appointment should be suggested to discuss Mr Castallani's drinking. Even if the admission shows that the pancreatitis was due to another cause, such as gallstones, this level of drinking is harmful.

## References

1. Longmore, M, Wilkinson, I & Rajagopalan, SR 2004, *Oxford handbook of clinical medicine*, 6th edn, Oxford University Press, Oxford, p. 478.
2. Ewing, J 1984, 'Detecting alcoholism: the CAGE questionnaire', *Journal of the American Medical Association*, vol. 252, pp. 1905–7.

## Further reading

Carroll, JK, Herrick, B & Gipson, T et al. 2007, 'Acute pancreatitis: diagnosis, prognosis, and treatment', *American Family Physician*, vol. 75, no. 10, pp. 1513–20.



# Case 31 Kirrilee DeMarco

## Instructions for the doctor

This is a long case.

Please take a history and conduct an appropriate examination. The observing examiner will give you the results of your initial investigations on request.

Discuss your differential diagnosis and negotiate a management plan with Kirrilee.

**Scenario**

Kirrilee is a 23-year-old fashion designer. She presents to you with a three-week story of abdominal pain.

She is a new patient at the practice and so no past medical history is available.

# Instructions for the patient Kirrilee DeMarco

You are a 23-year-old fashion designer. You live with your female partner, Natalie, who is a nurse.

In the last three weeks you have had abdominal pain. At times the pain is severe. Since you got the pain you have needed to go to the toilet more often, and pass soft stool at least three times a day. Last week you noticed some blood mixed in with the stool and that was when you decided to make a doctor's appointment.

You feel the pain in your right iliac fossa. It is worse after you eat.

You are nauseated but have not vomited. You have lost your appetite and have two painful ulcers in your mouth. You have lost 2 kg in weight and feel weak.

You work in the city as a fashion designer. You and Natalie have been together since you met at university.

You have never smoked. Most Saturday nights you drink about 4–5 glasses of wine.

You recently visited your brother on the Central NSW Coast but have not travelled overseas.

**Medication**
Nil prescribed
Have tried antacids and ranitidine from the chemist but no effect
A friend gave you ginger tablets from the herbal shop but they had no effect
You have no allergies

**Family history**
Both your parents are alive and well

**Clinical examination findings**
Temperature 37.0°C
Pulse 64
BP 116/80 mm Hg
Abdomen—tender right iliac fossa
Mouth—ulcers × 2
Rectal examination—normal.

# Instructions for the facilitator

To be given to the candidate on specific request by the observing examiner.

Full blood count:

| | | | |
|---|---|---|---|
| Haemoglobin | 116 (115–155) g/L | | |
| MCV | 85 (82–99) fL | | |
| RDW | 14 (< 16) % | | |
| Platelets | 311 (150–400) g/L | | |
| White cells | 10.3 (4.0–11) g/L | | |
| Neut | 70% | 7.2 | (1.8–7.5) g/L |
| Lymph | 22% | 22.7 | (1.0–4.0) g/L |
| Mono | 6% | 0.41 | (0.1–1.2) g/L |
| Eosin | 2% | 0.2 | (< 0.7) g/L |
| ESR | 43 mm/hr | | |
| Na | 136 (134–146) mmol/L | | |
| K | 4.2 (3.4–5.5) mmol/L | | |
| Cl | 106 (95–108) mmol/L | | |
| HCO3 | 24 (22–32) mmol/L | | |
| Urea | 4.9 (3.0–8.0) mmol/L | | |
| Creat | 54 (30–100) mmol/L | | |
| Bili | 11 (< 16 μmol/L) | | |
| ALP | 42 (20–105 μmol/L) | | |
| GGT* | 49 (< 36 μmol/L) | | |
| ALT | 15 (< 31 μmol/L) | | |
| Alb | 42 (38–50 μmol/L) | | |
| Total prot | 74 (65–85 μmol/L) | | |

Stool tests

—Microscopy—semi-formed faecal matter
—Normal faecal bacterial growth
—No ova, cysts or parasites
—Faecal occult blood—positive on two out of three samples.

## Suggested approach to the case

Establish rapport

Open questions about abdominal pain

Closed questions to determine cause and exclude others
- —Nature of pain, relieving and alleviating factors
- —Appetite—decreased
- —Nausea—present, but no vomiting
- —No haematemesis
- —Blood in stool and change in bowel habit
- —Absence of symptoms of liver disease—no jaundice

Absence of symptoms of gallstones

Genitourinary symptoms—no dysuria, no haematuria, no frequency, no discharge

LMP last week, female partner, pregnancy not possible

Sensitive questioning to exclude use of anal sex toys as cause of rectal bleeding

Travel—nil relevant

Medication—has tried ranitidine and antacids and ginger tablets

Allergies—nil known

Family history—nil known.

### Examination

Temperature 37.0°C

Hands normal

BP 114/80 mm Hg

Pulse 64

Height 171 cm

Weight 76 kg

BMI 26 kg/m$^2$

No jaundice or pallor

Mouth ulcers × 2

Examination of chest and cardiovascular system—normal

Examination of abdomen
- —Abdominal pain without guarding in right iliac fossa
- —Bowel sounds—normal
- —Ask to do rectal examination and proctoscopy—facilitator to say this would be done and the examination is normal

Urine—NAD.

### Summary of key findings

Abdominal pain, nausea, reduced appetite, mouth ulcers, rectal bleeding.

### Differential diagnosis

Crohn's disease

Ulcerative colitis

Infection

Appendicitis—much less likely given symptom duration

Irritable bowel syndrome.

### Management

Explanation of possible cause and plan of investigation

Request initial investigations from observing examiner

FBC, ESR

UEC

LFTs

Stool for MCS, ocp, occult bloods × 3

Results—confirm inflammation and blood in stool, no infectious cause

Recommend referral for colonoscopy

Arrange follow-up—with result of colonoscopy

Discuss impact of illness on ability to work, assess need for medical certificate

High alcohol intake at weekends, raised GGT—motivational interviewing on willingess/ability to consider change.

## Case commentary

Abdominal pain is a common problem with a wide differential diagnosis. A thorough history and examination in this case should give the doctor the clues needed to consider Crohn's disease in the differential diagnosis. More common causes of pain and bleeding, such as infection, need to be excluded, prior to referral for endoscopy.

## Common pitfalls

Pregnancy should be considered in the differential diagnosis but can be discounted when Kirrilee states she has a female partner and has never had heterosexual intercourse.

# Further reading

Grimpen, F 2008, 'Rational investigation of upper abdominal pain', *Australian Family Physician*, vol. 37, no. 8, pp. 602–7.

Knight, A 2008, 'I've been bleeding from the bowel', *Australian Family Physician*, vol. 37, no. 11, pp. 918–21.

Knutson, D, Greenberg, G & Cronan, H et al. 2003, 'Management of Crohn's disease—a practical approach', *American Family Physician*, vol. 68, no. 4, pp. 707–14.



# Case 32 Sonja Markova

## Instructions for the doctor

This is a long case.

Please take a history and conduct an appropriate physical examination. The facilitator will give you the results of initial tests on request. Outline the most likely and differential diagnoses to Sonja and negotiate with her a management plan.

**Scenario**

Sonja Markova is a 49-year-old teacher at the local primary school. She recently attended the Red Cross to give blood. However, she was found to be anaemic and could not give blood. The Red Cross told her to see her GP soon, as the Hb was 81 g/L (normal range 115–165 g/L).

The following is on her summary sheet:

**Past medical history**
Nil recorded

**Medication**
Nil recorded

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Mother and father alive and well

**Social history**
Drinks two glasses of wine per week
Non-smoker.

# Instructions for the patient Sonja Markova

You are 49 years old and work as a teacher. Recently you have been feeling quite tired but had put it down to the extra responsibility that you have taken on at work. It was not too much of a surprise that the Red Cross found that you were anaemic but it has worried you. You have not been anaemic before.

If the doctor asks, you remember that you have had some indigestion recently. Again you had put it down to the extra work, but you do now carry around a packet of indigestion medication, which you bought from the pharmacy.

You eat a good diet with several serves of red meat per week. You have no respiratory symptoms. You have had some nausea but no vomiting. Your bowels are unchanged and there is no rectal bleeding. You have not lost any weight. You have a progesterone releasing intra-uterine system (Mirena) in-situ and as a result are amenorrhoeic.

The following information is on your medical record:

**Past medical history**
Nil recorded

**Medication**
Nil recorded

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Mother and father alive and well

**Social history**
Drinks two glasses of wine per week
Non-smoker.

## Examination

You display epigastric tenderness on examination of the abdomen. Physical examination is otherwise normal.

## Instructions for the facilitator

Candidates should ask to perform a rectal examination. The facilitator should interrupt at this point and advise the candidate that the rectal examination is normal with no blood on the glove, and that an examination is not to be done.

### Results of blood tests

Blood tests must be requested item per item

Do not give a result unless it has been requested

FBC confirms Hb 81 g/L

ESR 40 mm/h (normal 3–12 mm/h)

Blood film shows hypochromasia and microcytosis

Iron studies: ferritin 4 μg/dL (normal 20–150 μg/dL)

U and E, LFTs, B12 and folate normal.

## Suggested approach to the case

Establish rapport

Open questions to explore patient's ideas, concerns and expectations.

### Specific questions

To determine cause of anaemia:

Review of diet

Bleeding
- —Nose bleeds
- —Periods

Occult bleeding
- —Indigestion
- —Melaena
- —Weight loss

Closed questions to determine impact of anaemia:
- —Shortness of breath
- —Tiredness
- —Palpitations

Discuss the impact of symptoms on work, home life

Brief systems review

Past medical history

Drugs—prescribed medication, OTC, recreational/illicit

Allergies

Family history

Social history—alcohol consumption, smoking

Request permission to examine.

## Examination

Pulse, BP

Exclude: jaundice, anaemia, koilonychia, glossitis, lymphadenopathy

Chest clear

Heart sounds normal

Abdominal examination
- —Inspection
- —Palpation
- —Examine for liver, spleen, kidneys
- —(Percussion)
- —(Auscultation)

Request to do pr.

## Investigations

Request results from the facilitator:

FBC

ESR

B12, folate

UEC

LFTs

Iron studies.

### Most likely diagnosis

Occult blood loss—have excluded poor diet as a cause

GI loss most likely—peptic ulcer or gastritis from history.

### Differential diagnoses

Coeliac disease

Inflammatory bowel disease—Crohn's, ulcerative colitis

Diverticular disease

Malignancy also possible but less likely on history

Meckel's diverticulum.

### Management

Explain most likely diagnosis

Need to test for *Helicobacter pylori*

Commence proton pump inhibitor

Add antibiotics for triple therapy if *H. pylori* positive

Plan review

If symptoms or anaemia persist refer for gastroscopy and colonoscopy

Answer patient's questions

Preventive health: review immunisation status.



## Case commentary

This is a case of iron deficiency anaemia. A serum ferritin of <12 μg/dL is diagnostic of iron deficiency anaemia.

The doctor should make this diagnosis from the history and focus on finding the cause of the anaemia in a sensitive and systematic manner.

The combination of iron deficiency anaemia and indigestion suggests an upper gastrointestinal ulcer. In those under 55 years old a 'test and treat' policy is considered safe practice because of the high effectiveness of ulcer treatment plus the low yield for GI malignancy on scoping.[1]

Arrangements for follow-up are essential to ensure that persisting indigestion or anaemia are investigated with both gastroscopy and colonoscopy.

# Reference

1. Duggan, AE 2007, 'The management of upper gastrointestinal symptoms: is endoscopy indicated?' *Medical Journal of Australia*, vol. 186, no. 4, pp. 166–7.

# Further reading

Doust, J 2003, 'Diagnostic and management strategies for anaemia in adults', *Australian Family Physician*, vol. 32, no. 11, pp. 889–94.

Killip, S, Bennett, JM & Chambers, MD 2007, 'Iron deficiency anemia', *American Family Physician*, vol. 75, no. 5, pp. 671–8.



# Case 33 Annie Nguyen

## Instructions for the doctor

This is a short case.

Please take a history from Annie and then outline to the facilitator what examination and investigations you would normally do in your clinical practice and indicate the most likely diagnosis.

**Scenario**

Annie Nguyen is 19 years old and in her first year at university. She has not been to the surgery before. She has made the appointment because she has been nauseated for the past three days.

While waiting to see the doctor she completed a new patient questionnaire in which she gave the following information:

**Past medical history**
Glandular fever Year 12 of high school

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Fully immunised

**Pap smear**
Normal one year ago

**Family history**
Nil relevant

**Social history**
Lives on campus in hall of residence
Non-smoker
Alcohol—3 standard drinks per week.

# Instructions for the patient Annie Nguyen

You are 19 and in your first year at university. You have not been to this GP before. You have been nauseated for the past three days but have not vomited. You had diarrhoea for the first two days but this has now settled. You do not feel like eating. You experienced colicky abdominal pain just before each episode of diarrhoea.

Your last menstrual period was one week ago. You have no other symptoms. You are not currently sexually active.

You have filled out the new patient questionnaire as follows:

**Past medical history**
Glandular fever Year 12 of high school

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Fully immunised

**Pap smear**
Normal one year ago

**Family history**
Nil relevant

**Social history**
Lives on campus in hall of residence
Non-smoker
Alcohol—3 standard drinks per week.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Annie's ideas, concerns and expectations.

### Specific questions

Gastrointestinal
- —Anorexia
- —Nausea and vomiting
- —Haematemesis
- —Diet pre-nausea
- —Abdominal pain
- —Diarrhoea/constipation
- —Blood or melaena pr

Associated features, such as headache

History of recent travel or friends with similar illness

Substances—medication prescribed elsewhere, OTC, alcohol, drugs of abuse

Systems review—fever, energy level

Genitourinary
- —Frequency, haematuria, discharge
- —Menstrual cycle, LMP, risk of pregnancy

Request permission to examine.

### Most likely diagnosis

Gastroenteritis.

### Examination

Pulse

Temperature

Hydration

Jaundice

Abdominal examination—for tenderness, masses or organomegaly

Urine specimen dipstick.

### Investigations

Nil needed.

## Case commentary

Nausea is a common presenting symptom in general practice and the list of potential causes is extensive. This case tests the doctor's ability to adopt a systematic approach to the diagnosis and follow the dictum that 'common things are common'. It is essential to explore Annie's risk of pregnancy.

The question asks the doctor to tell the facilitator what physical examination and investigations they would normally do in their clinical practice. The history is strongly suggestive of gastroenteritis and there are no alarming symptoms so a rectal examination and investigations are not needed at this consultation.

# Further reading

Metz, A & Hebbard, G 2007, 'Nausea and vomiting in adults: a diagnostic approach', *Australian Family Physician*, vol. 36, no. 9, pp. 688–92.

Murtagh, J 2007, *General practice*, 4th edn, McGraw-Hill, Sydney, pp. 642–6.



# Case 34 Nicki Walsh

## Instructions for the doctor

This is a long case.

Please take a history from Nicki and conduct a focused examination. Outline your differential diagnosis to Nicki and negotiate with her a management plan.

**Scenario**

Nicki Walsh is a 42-year-old woman who works at the local bakery. Her boss has made an appointment for her today as she has 'gone yellow'. Nicki has complained of pain after take-away meals for a while but says that the pain has been worse over the past few days.

The following information is on her summary sheet:

**Current medical history**
Obese

**Past medical history**
Tonsillectomy aged 13

**Medication**
Previous script for Orlistat

**Allergies**
Penicillin

**Immunisations**
None recorded

**Social history**
Lives with de facto partner
Works at bakery
Smoking—not known
Alcohol—not known.

# Instructions for the patient Nicki Walsh

You have had intermittent episodes of right hypochondrial pain. The pain often comes on after a take-away meal. You have cut down take-aways as a result and have been feeling much better. Last week you had some pain that was much worse than before. Today you have noticed that you are yellow and that your urine has gone dark, your stools are pale and your skin is itchy.

Your boss is worried that you have hepatitis and asked you to stop work in the shop immediately. You need to keep working as your de facto is currently unemployed and you will lose your house if you don't keep up the payments. You are a casual employee and have no access to paid sick leave.

You are scared about having surgery as your mother died of pulmonary embolus soon after surgery for varicose veins. You will appear reluctant to have surgery but won't explain why unless the doctor sensitively asks about your concerns re surgery.

You eat a lot of the free left-overs from work. You gave up smoking 10 years ago. You drink three or four bourbons when you go out for a night once a month with your girlfriends. You use condoms for contraception and cannot remember when your last Pap smear was done.

The following information is on your medical record:

**Current medical history**
Obese

**Past medical history**
Tonsillectomy aged 13

**Medication**
Previous script for Orlistat

**Allergies**
Penicillin

**Immunisations**
None recorded

**Social history**
Lives with de facto partner
Works at bakery
Smoking—not known
Alcohol—not known.

## Suggested approach to the case

Establish rapport

Open questions

Explore Nicki's ideas, concerns and expectations.

### Specific questions

Jaundice

Dark urine

Pale stools

Pain

Vomiting

Change in weight

Fever

Pruritus

Haematemesis

Change in bowel habit

Melaena.

### Past medical history

Jaundice, haemolytic anaemia or bleeding disorders

Transfusions, foreign travel, IV drug use by self or partner

Medication—prescribed, OTC, illicit

Family history

Smoking and alcohol history

Request permission to examine.

### Examination findings

Height 1.68 m

Weight 101 kg

BMI 36 kg/m$^2$

Temperature—normal

BP 130/70

Pulse 92

Hands—no liver flap, no clubbing

Eyes—sclerae jaundiced

Abdomen
—Tender right hypochondrium
—Gall bladder enlarged
—No enlarged liver, kidney or spleen
—Bowel sounds normal

(genitalia—normal)

pr—no masses, no blood

Lymph nodes—nil abnormal.

## Most likely diagnosis

Obstructive jaundice due to gallstones in the common bile duct.

## Differential diagnosis

Need to exclude infection Hepatitis A, B, C

Chronic alcohol use

Cholecystitis

Cytomegalovirus, Epstein-Barr virus, cryptosporidium in AIDs (less common infections)

Liver, pancreatic or gall bladder tumour (rare).

## Management

### Investigations

Urinalysis for bilirubin—expect conjugated bilirubin confirming obstructive jaundice

FBC

LFTs

UEC

ESR, CRP

Hepatitis serology

Cytomegalovirus, Epstein-Barr virus serology

Ultrasound scan upper abdomen

Explanation about gallbladder disease—patient information leaflet

Dietary advice, need for weight loss and avoid fatty foods

Medication
—Analgesics
—Anti-emetics prn

Likely referral for surgery

Sensitive discussion re risks of pulmonary embolus and ways to prevent it

Cannot serve in the bakery until Hepatitis A has been excluded

Arrange review and discuss immunisations and Pap smear.



## Case commentary

Nicki has a common problem of gall bladder disease with the more unusual presentation of obstructive jaundice due to a blockage in the common bile duct. Her work in a bakery makes it a public health requirement that she is cleared of an infectious intrahepatic cause that she could spread, such as Hepatitis A. The GP is aware of her financial need to work but in this instance the public health need takes priority over the patient's individual need.

Another twist to the consultation is the story of Nicki's fear of surgery as a result of her mother's death of a pulmonary embolism. The ideal is for the GP to allow Nicki to express this fear and then use the fear as a motivator for Nicki to lose weight which is important for her recovery from surgery in the short term and prevention of chronic disease.

# Further reading

Amory, JK, Rosen, H & Sukut, C et al. 2006, 'Clinical problem-solving. A jaundiced eye', *New England Journal of Medicine*, vol. 354, no. 14, pp. 1516–20.

Roche, SP & Kobos, R et al. 2004, 'Jaundice in the adult patient', *American Family Physician*, vol. 69, no. 2, pp. 299–304.



# Case 35 Les Williams

## Instructions for the doctor

This is a long case.

Please take a history from Les and conduct an appropriate physical examination. Outline your differential diagnosis to Les and negotiate with him a plan for initial management.

**Scenario**

Mr Les Williams is a 52-year-old engineer. He is coming to see you today for advice about his 'haemorrhoids'.

The following information is on his summary sheet:

**Past medical history**
Partial menisectomy left knee 2002

**Medication**
Nil recorded

**Allergies**
Nil known

**Family history**
Mother and father alive and well

**Social history**
Nil recorded.

# Instructions for the patient Les Williams

You are 52 years old and work as an engineer.

Ten years ago you had a problem with haemorrhoids. You bled after defecation and had an embarrassing itch. You think the haemorrhoids have come back and want some advice.

Initially you will be reluctant to say much to the doctor but when asked sensitively you will outline the following symptoms, which are quite different from your previous problem.

Over the last few weeks you have noticed some vague abdominal pain, which is worse on the right side. It is not severe and you have continued to work. Last weekend you had two episodes of rectal bleeding. The blood was dark red and mixed in with the stool. There was no mucus. Your appetite is good and your general health is good. Two years ago your National Bowel Cancer Screening program tests were negative.

You live with your girlfriend and don't have any children (by choice). You don't smoke and drink about three beers on weekend nights.

You haven't had any immunisations since you were a baby.

## Clinical examination findings

You will demonstrate pain in the right iliac fossa but no other abnormalities. When the doctor asks to feel for inguinal nodes and do a rectal examination please tell them that there is no lymphadenopathy and that the rectal examination is normal.

The following information is on your medical record:

**Past medical history**
Partial menisectomy left knee 2002

**Medication**
Nil recorded

**Allergies**
Nil known

**Family history**
Mother and father alive and well

**Social history**
Nil recorded.

# Suggested approach to the case

Establish rapport

Open-ended questions to explore patient's ideas, concerns and expectations:
- —How can I help?
- —What makes you think it is your haemorrhoids?

## Specific questions

Rectal bleeding—when, relationship to defecation

Abdominal pain

Nausea, vomiting

Change in bowel habit, tenesmus

Weight loss

Any change in diet/appetite

Past medical history, drugs, allergies, family history, social history, systems review
- —Brief overview

Request permission to examine.

## Examination

Pulse

BP

Temperature

Jaundice

Anaemia

Abdominal examination
- —Inspection
- —Palpation
  - —Check where area of pain is
  - —Examine for liver, spleen, kidneys
- —(Percussion)
- —Auscultation

Request to examine inguinal nodes and do pr.

### Management

Explain that the symptoms are not necessarily caused by haemorrhoids

Abdominal pain and new, different rectal bleeding require investigation.

### Differential diagnosis

Need to exclude carcinoma

Other common possibilities
- —Haemorrhoids
- —Anal fissure
- —Polyps
- —Inflammatory bowel disease—Crohn's disease, ulcerative colitis
- —Diverticular disease.

### Investigations

FBC

ESR

UEC

LFTs
- —Refer for urgent colonoscopy or urgent air contrast barium enema and sigmoidoscopy if colonoscopy not available
- —Arrange follow-up, including review of immunisations.



## Case commentary

The key issue in this case is to arrange appropriate investigations to exclude colorectal cancer. The past history of haemorrhoids could distract the doctor from making a full assessment of the current symptoms. It is an important aspect of clinical practice to elicit the patient's ideas and expectations but doctors must make clinical judgments about the appropriateness of presumed diagnoses and specific requests. A good doctor will sensitively explore Mr Williams's ideas about possible causes of the pain and bleeding and explain that more serious causes than haemorrhoids need to be checked out.

Most alarm features have poor sensitivity and specificity for colorectal cancer;[1] any patient over 40 with rectal bleeding needs referral for a colonoscopy.[2] Presence of haemorrhoids associated with bright red bleeding not mixed with stool can provide false reassurance as a cancer



**Figure 1** Teenage acne (see page 4).
Photo courtesy of Richard P. Usatine, MD



**Figure 2** Rash on outside of right and left elbows (see page 87).
Photo courtesy of the National Psoriasis Foundation



**Figure 3** Rash on four-month-old baby (see page 81).
Photo courtesy of the Eczema Association of Australasia Inc.



**Figure 4** ECG courtesy of Dr Brendan Bell (see page 110)



**Figure 5** Painful, red right eye (see page 139)



**Figure 6** Close-up of painful, red right eye (see page 139)

was present in 2% of patients with these symptoms who were referred to a diagnostic clinic.[3]

This case usually leads to lively discussion about the appropriate time to tell a patient that their symptoms might be due to cancer. Our groups have not reached consensus on this! Some argue that there is no need to worry Mr Williams until the diagnosis is known whereas others argue that it is the patient's right to know what the doctor is thinking. We all agree that if Mr Williams asks a direct question such as, 'Do you think this might be cancer?' we would answer, 'Yes, it might be' and then give him time to respond to this possibility. Further explanation and information would be tailored to his response.

No immunisation history is given. Doctors should note this and, if time permits, advise Mr Williams of the need to be up to date with tetanus, diphtheria and polio and offer to do this in another appointment (or refer him to the practice nurse).

This case asks about the initial investigations required. Further investigations may be required depending on the results of the initial tests.

## References

1. Ford, AC, Veldhuyzen van Zonten, SJ & Rodgers, CC et al. 2008, 'Diagnostic utility of alarm features for colorectal cancer: systematic review and meta-analysis', *Gut*, vol. 57, no. 11, pp. 1545–53.
2. McMurrick, P, Dorien, S & Shapiro, J 2006, 'Bowel cancer: guide for the GP', *Australian Family Physician*, vol. 35, no. 4, pp. 192–7.
3. Robertson, R, Campbell, C & Weller, DP et al. 2006, 'Predicting colorectal cancer risk in patients with rectal bleeding', *British Journal of General Practice*, vol. 56, no. 531, pp. 763–7.

## Further reading

Knight, A 2008, 'I've been bleeding from the bowel', *Australian Family Physician*, vol. 37, no. 11, pp. 918–21.

# Section 13 Infectious disease
# Case 36 Jules Chin

## Instructions for the doctor

This is a short case.

**Scenario**

Jules Chin is a 24-year-old trainee financial adviser. Last week she attended your surgery for a Pap smear. She saw your part-time colleague, Dr Maxine Hastings. Jules received a phone call from your practice nurse asking her to attend for urgent review. The notes indicate that Jules's PCR test for Chlamydia was positive; the Pap smear result was normal.

Please meet with Jules to explain the problem, negotiate a management plan and answer her queries. You have not met Jules before.

**Past medical history**
Nil

**Medication**
On Levlen ED contraceptive pill (ethinyloestradiol 30 mcg, levonorgestrel 150 mcg)

**Allergies**
Nil

**Immunisations**
Second Gardasil given two months ago

**Social history**
Non-smoker.

# Instructions for the patient Jules Chin

You are fit and well and working hard towards your qualification as a financial adviser. Last week you attended the GP for a routine Pap smear.

Yesterday you received a phone call from the practice nurse asking for you to come in for urgent review. The doctor you saw is not available so you book in with the next available GP. It was difficult to sleep last night as you were worried about what had been found on the Pap smear.

**Past medical history**
Nil

**Medication**
On Levlen ED contraceptive pill (ethinyloestradiol 30 mcg, levonorgestrel 150 mcg)

**Allergies**
Nil

**Immunisations**
Second Gardasil given two months ago

**Social history**
Non-smoker.

If the doctor asks, you will tell them that:

- you have no symptoms of a sexually transmitted disease—no pelvic pain, urinary frequency, burning on passing urine, vaginal discharge, unexpected vaginal bleeding
- you live with your boyfriend David and have not had any other partner in the past year
- you used condoms for the first three months of the relationship but not in the past nine months
- last week was your first STI check
- your boyfriend David is asymptomatic
- you would like to have children in the future.

You want to know how you caught the infection, and if it means that David has been unfaithful.

## Suggested approach to the case

Establish rapport

Clarify reason for presentation about results

Outline clearly that the result is Chlamydia positive

Inform that Pap smear is negative

Doctors should ensure that Jules has an opportunity to ask questions and express any concerns or fears

During the consultation the following topics should be covered:

- Chlamydia needs treatment with antibiotics (seven days doxycycline or stat dose azithromycin)
- Check no contraindication to antibiotics
- Advise re risk of interaction between antibiotics and contraceptive pill and need for alternative protection, such as condoms, until seven days of contraception pill taking, after the antibiotics. (Condoms will also be advised until partner is treated and full STI screen negative.) To get seven days of contraceptive pill continuously, two packets may need to be run together
- Chlamydia is a sexually transmitted infection
- Jules needs a full STI screen with blood tests for HIV, Hepatitis B and syphilis
- Partner will need testing and treating
- Advise re need to use condoms until both treated
- Advise that Chlamydia is a notifiable condition
- Review to ensure Chlamydia has cleared—advice variable
  —Retest in 3–4 weeks[1] or 3–4 months[2]
- Discussion of implications on relationship
  —Untreated Chlamydia can be asymptomatic but infectious for up to 18 months
  —Possible that neither partner has been unfaithful since the beginning of this relationship.

### Immunisations

This is an opportunity to remind Jules to book for her third Gardasil injection.

## Case commentary

Giving results of tests that another practitioner requested is an increasingly common aspect of clinical practice now that many more GPs consult part-time. This case requires the candidate to pick up Jules's concerns and reassure her that the Pap is normal but that the Chlamydia is a potentially serious problem that does need treatment. This should be done with sensitive honesty and being mindful of the implications of this diagnosis for Jules's relationship. Treatment of any recent partners is also essential.

## Common pitfalls

Wrong or inaccurate information has the potential to destroy the trust in David and Jules's relationship, so GPs should cover the issue that Chlamydia can lie dormant and that current infection does not necessarily equate to recent acquisition and unfaithfulness.

# References

1. Mazza, D 2004, *Women's health in general practice*, Butterworth Heinemann, Sydney, p. 226.
2. Miller, K 2006, 'Diagnosis and treatment of chlamydia trachomatis infection', *American Family Physician*, vol. 73, pp. 1411–16.

# Further reading

Toyne, H, Glasgow, W & McGuiness, C et al. 2006, 'Screening for chlamydia with the Pap test', *Australian Family Physician*, vol. 35, no. 9.



# Case 37 Edward Reed

## Instructions for the doctor

This is a short case.

Please conduct this consultation as you would in your clinical practice. There is no need to conduct an examination.

**Scenario**

Edward Reed is a 33-year-old hairdresser. He has been in a relationship with Frank for several years. Earlier in the year Edward went on holiday to Kenya and Uganda and had sex with several male prostitutes.

Last week Edward came to see your practice partner to ask for an HIV test. Previous HIV tests have been negative. This test has come back positive on both enzyme immunoassay and Western blot technique. Your practice partner is on holiday and Edward is booked in to see you today to get his results.

The following information is on his summary sheet:

**Past medical history**
Rectal gonorrhoea 2000

**Medication**
Nil recorded

**Allergies**
Nil known

**Immunisations**
Nil known

**Social history**
Lives with Frank
Smokes 5–10 cigarettes per day.

# Instructions for the patient Edward Reed

You are a 33-year-old hairdresser. You have been in a relationship with Frank for several years. Earlier in the year you went on holiday to Kenya and Uganda and had sex with several male prostitutes.

Last week you went to your GP to ask for an HIV test and you have come back for the results. The GP you saw last week is now on leave so you are seeing one of the other doctors in the practice.

You have no symptoms and your previous HIV tests were negative.

The following information is on your medical record:

**Past medical history**
Rectal gonorrhoea 2000

**Medication**
Nil recorded

**Allergies**
Nil known

**Immunisations**
Nil known

**Social history**
Lives with Frank
Smokes 5–10 cigarettes per day.

## Suggested approach to the case

Establish rapport

Explore Edward's current thinking about the likely result

Do you need to 'break bad news' or just confirm it?

Break bad news
- —Issue warning
- —Chunk the information (see Common pitfalls on page 187)
- —Monitor and wait for a response
- —Acknowledge emotional response
- —Offer information and follow-up

Check about mental state—is Edward suicidal, who will he talk to, what support does he have?

Information
- —Will take time to adjust to the diagnosis
- —Treatment is available
- —Need for regular monitoring
- —Safety—sex, blood products, drugs etc
- —Suggest he tells Frank, offer assistance with this
- —Local support group
- —Need to check out implications for work as a hairdresser

Discuss mandatory disease notification and contact tracing

Will need to do further blood tests and physical examination on another occasion

Other preventive activity—check re smoking, alcohol intake, drug use, need for Hepatitis B, Hib, polio, ADT, influenza and pneumococcal immunisations

A good doctor will
- —Establish rapport
- —Demonstrate empathy
- —Explain diagnosis clearly
- —Provide information and seek questions of clarification
- —Sensitively handle emotional response
- —Arrange clear plan for follow-up both short and long term.

## Case commentary

GPs often have to break bad news. The skill of giving information sensitively needs practice as it can determine the patient's response to the news. I tell myself that I am not responsible for the news but I am responsible for how it is delivered. Maintaining a relationship with a patient may be more important than ensuring patients are fully informed in one consultation, particularly now that strategies and drugs can effectively control HIV and significantly reduce morbidity and mortality.[1]

This case tests a doctor's ability to give information in clear English, free from medical jargon, and to judge the patient's response to this information. The response to the information is then used as a gauge as to how to run the rest of the consultation.

The suggested approach includes the list of vaccinations recommended for HIV-positive individuals. The need for immunisation against Hepatitis B should be known but a wise doctor and safe GP will check the immunisation schedule guidelines for other requirements.[2]

## Common pitfalls

There is a risk that the doctor will do all the talking. When charged with the need to give information many doctors do just that. They talk and talk without giving any time or opportunity for the patient to react to the information. Chunking the information can overcome this. Each piece of information is given in a small chunk and then the patient is given an opportunity to respond.[3]

Another trap is using medical terms that are beyond the patient's comprehension. This can be a challenge for doctors whose first language is not English.

# References

1. Chen, LF, Hoy, J & Lewin, SR 2007, 'Ten years of highly active antiretroviral therapy for HIV infection', *Medical Journal of Australia*, vol. 186, no. 3, pp. 146–51.
2. Department of Health and Ageing 2008, *The Australian immunisation handbook*, 9th edn, p. 108.
3. Faulkner, A 1998, 'ABC of palliative care. Communication with patients, families, and other professionals', *British Medical Journal*, vol. 316, no. 7125, pp. 130–2.



# Section 14 Men's health
# Case 38 Kim Hosking

## Instructions for the doctor

This is a short case.

Please take a history. The facilitator will give you the results of the examination on request. Outline the most likely diagnosis to the patient and negotiate a management plan with him.

**Scenario**

Mr Kim Hosking is a 70-year-old retired architect. He comes to see you every few months for a blood pressure check. At the last check Kim mentioned that he was having 'waterworks trouble' and you suggested he make an appointment to discuss this further.

The following information is on his summary sheet:

**Past medical history**
Hypertension—diagnosed 2004

**Medication**
Perindopril 5 mg od

**Allergies**
Nil

**Immunisations**
Up to date, including influenza

**Social history**
Married
Three children, now grown up
Ex-smoker.

# Instructions for the patient Kim Hosking

You are a 70-year-old retired architect. Over the past few years you have noticed that your urine stream is becoming weaker. You pass urine more often and now have to get up about three times each night. You get frustrated that, having got out of bed, you then have to wait a while before the stream starts. It embarrasses you that you often dribble after passing urine, which wets your clothes.

Your blood pressure is currently well controlled and you enjoy being retired, except for the urinary symptoms. Two weeks ago at your blood pressure check you mentioned to your GP that you had 'waterworks trouble'. The GP suggested that you make an appointment to discuss this, which is why you are here.

The following information is on your medical record:

**Past medical history**
Hypertension—diagnosed 2004

**Medication**
Perindopril 5 mg od

**Allergies**
Nil

**Immunisations**
Up to date, including influenza

**Social history**
Married
Three children, now grown up
Ex-smoker.

# Information for the facilitator

### Clinical examination findings

Temperature, pulse and blood pressure are within normal limits

Abdominal examination is normal

Rectal examination reveals a smooth, symmetrically enlarged prostate.

# Suggested approach to the case

Establish rapport

Open-ended questions to gain understanding of Kim's ideas, concerns and expectations.

### Specific questions

Details—urinary frequency, stream and nocturia

Pain or dysuria

Haematuria

Terminal dribbling

Fever

Systemic malaise, weight loss

Sexual function

Urethral discharge.

### Ask for the examination findings

Temperature

Pulse

BP

Abdominal examination
—Inspection
—Palpation—exclude palpable bladder

Genitalia

Rectal examination—including the prostate.

### Most likely diagnosis

Obstructive lower urinary tract symptoms due to benign prostatic hypertrophy.

### Investigations

Urine for MCS

BSL

PSA—optional, needs informed consent (see Case commentary below)

UEC—optional (see Case commentary below).

### Management

For benign prostatic hypertrophy alpha-blocker or 5-alpha-reductase inhibitor or refer for surgery

Arrange follow-up.

### Extras for this case

Discuss alcohol consumption.

## Case commentary

Kim has obstructive lower urinary tract symptoms (LUTS), a common problem for older men. The doctor will need to take a history of these symptoms and must not be too embarrassed to ask about sexual function. The most likely cause is benign prostatic hypertrophy but the doctor needs to ask about haematuria, weight loss, fatigue and bone pain, which would suggest carcinoma.[1]

The examination will focus on the abdomen, including a rectal examination, and exclude an enlarged bladder. Rectal examination can now be done on simulated models and it is worth practising on such models if you can.

Testing for prostatic specific antigen (PSA) is controversial (see Jock Palmer Case 39 on pages 193–6). PSA testing is recommended after fully informed consent has been obtained in a man who is expected to live over ten years and would want further investigation and treatment, if the PSA is abnormal.

Kim's history of hypertension increases the risk of renal failure, so it is reasonable for doctors to request renal function tests in this case. Because of the nocturia and frequency, Kim needs a fasting BSL to

exclude diabetes. The RACGP recommend BSL screening for diabetes every three years.[2]

An alpha-blocker relieves symptoms straight away but also has a hypotensive effect. It is not a first line antihypertensive as there is no proof of positive impact on cardiovascular events. Kim's blood pressure will need monitoring for hypotension and a reduction in the perindopril dose may be indicated. 5-alpha reductase inhibitors, such as finasteride, can take up to six months to work. Some patients may decide to purchase Saw palmetto from a health food shop as it has been suggested to be equal in efficacy to finasteride[3] but a Cochrane review showed no improvement compared with placebo.[4]

## References

1. Edwards, JL 2008, 'Diagnosis and management of benign prostatic hyperplasia', *American Family Physician*, vol. 77, no. 10, pp. 1403–10.
2. The Royal Australian College of General Practitioners 'Red Book' Taskforce 2009, *Guidelines for preventive activities in general practice*, 7th edn, The Royal Australian College of General Practitioners.
3. Gordon, AE & Shaughnessy, AF 2003, 'Saw palmetto for prostate disorders', *American Family Physician*, vol. 67, no. 6, pp. 1281–3.
4. Tacklind, J, MacDonald, R & Rutks, I et al. 2009, 'Serenoa repens for benign prostatic hyperplasia', *Cochrane database of systematic reviews*, no. CD001423, DOI: 10.1002/14651858.CD001423.pub2.



# Case 39 Jock Palmer

## Instructions for the doctor

This is a short case.

**Scenario**

Jock Palmer is a 52-year-old executive whose employer offers annual screening tests to their employees. This year they have included the prostate specific antigen (PSA) test for the first time. The company sent round an information letter but this left Jock confused. Jock trusts you as his GP and wants your opinion as to whether he should have this PSA test. Please discuss this with Jock.

The following information is on his summary sheet:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Nil significant

**Social history**
Business executive
Divorced
Non-smoker
Alcohol—6 standard drinks per week.

# Instructions for the patient Jock Palmer

You are a 52-year-old executive. Your employer offers you annual screening tests. This year you received a letter informing you that for the first time the tests would include the prostate specific antigen (PSA). The company sent round an information letter but this left you confused. You trust your GP and want the GP's opinion as to whether he should have this PSA test. You have made this appointment with your GP to discuss the PSA test.

You are well and have no urinary symptoms.

During the consultation you will ask the following questions:

1. What is the PSA test?
2. What are the advantages of having the test?
3. Is there any reason not to have the test done?
4. If the test is high does that mean that I have cancer?
5. What would happen if the result was high?

The following information is on your medical record:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Nil significant

**Social history**
Business executive
Divorced
Non-smoker
Alcohol—6 standard drinks per week.

## Suggested approach to the case

Re-establish rapport

Acknowledge that this is a complex and controversial issue

Question Jock about his understanding of PSA tests

Question Jock about his general health—exclude weight loss, fatigue, fever, bone pain.

### Specific questions

To exclude urinary symptoms
- —Frequency
- —Stream
- —Nocturia
- —Haematuria
- —Dysuria

Tailor explanation of PSA test to address Jock's concerns
- —PSA comes from the prostate
- —Test has limited accuracy
- —Low result does not mean that there is no cancer
- —Raised result does not mean that there is cancer
- —Combine PSA test with digital rectal examination of the prostate

If PSA is raised Jock will need to have further tests with a specialist, including prostatic biopsies

Early treatment of prostate cancer has not yet been proven to increase life expectancy

Does not fulfil criteria for a screening test.



## Case commentary

This case tests the doctor's ability to advise patients on a controversial topic. The hope was that PSA testing would enable early detection of prostate cancer and, by allowing early treatment, improve prognosis. The evidence is that prostate cancer screening can reduce risk of death from prostate cancer but the absolute benefit is small, and the chance of prostate cancer being diagnosed and treated (even if biologically unimportant) is increased by a much larger amount.[1] Jock's confusion

at the information that he was given is not surprising and the doctor needs to try to explain the principles of screening, the concepts of false-negatives and false-positives and enable Jock to make the right decision for himself.

The doctor needs to have a clear understanding of the criteria for a useful screening test. The WHO defined these as follows:[2]

1. The condition should be an important health problem
2. The natural history of the condition should be understood
3. There should be a recognisable latent or early symptomatic stage
4. There should be a test that is easy to perform and interpret, acceptable, accurate, reliable, sensitive and specific
5. There should be an accepted treatment recognised for the disease
6. Treatment should be more effective if started early
7. There should be a policy on who should be treated
8. Diagnosis and treatment should be cost-effective
9. Case finding should be a continuous process.

The PSA test does not fulfil these criteria.

## References

1. Barratt, AL & Stockler, MR 2009, 'Screening for prostate cancer: explaining new trial results and their implications to patients', *Medical Journal of Australia*, vol. 191, no. 4, pp. 226–9.
2. Wilson, J & Junger, G 1968, *The principles and practice of screening for disease*, World Health Organisation, Geneva.

## Further reading

Frydenberg, M & Wijesinha, S 2007, 'Diagnosing prostate cancer: what GPs need to know', *Australian Family Physician*, vol. 36, no. 5, pp. 345–7.

# Case 40 Costa Rinaldi

## Instructions for the doctor

This is a long case.

Please take a history. The facilitator will give you the results of the examination on request. Then negotiate a management plan with the patient.

**Scenario**

Mr Costa Rinaldi is a 36-year-old man. He rarely comes to see the GP but has booked an appointment today because his girlfriend sent him. She has a child from a previous relationship. She and Costa have not used contraception for the past year and they have not yet achieved a pregnancy.

The following information is on his summary sheet:

**Past medical history**
Chickenpox aged 11

**Medication**
Nil

**Allergies**
Nil

**Immunisation**
Nil recorded

**Social history**
Works as engineer.

# Instructions for the patient Costa Rinaldi

You are 36 years old and work hard as an engineer. Over the last few years you have put on weight and now have a BMI of 31 kg/m$^2$. You have always been keen to have a family and were delighted to meet Brenda. You want to have a family with her.

You have a great sex life but it is getting you down that Brenda is not pregnant. You have not used contraception for a year. You have a constant reminder that the lack of pregnancy is probably your problem as Brenda's 6-year-old daughter from a previous relationship lives with you.

This problem is beginning to affect your work and your relationship with Brenda. You do not smoke and you drink at least five bottles of wine a week. You have heard that some childhood infections can cause infertility and you are worried that the chickenpox is to blame. Brenda has sent you to this appointment.

You have no genitourinary symptoms.

The following information is on your medical record:

**Past medical history**
Chickenpox aged 11

**Medication**
Nil

**Allergies**
Nil

**Immunisation**
Nil recorded

**Social history**
Works as engineer.

# Instructions for the facilitator

## Clinical examination findings

On specific request please give the doctor the following results:

Pulse 74

BP 136/82 mm Hg

Height 1.75 m

Weight 108.8 kg

BMI 31 kg/m$^2$

No gynaecomastia

Abdominal examination—normal

Hair distribution—normal

Genitalia—normal testicular size, no varicocoele.

# Suggested approach to the case

Establish rapport

Open-ended questions to explore Costa's ideas, concerns and expectations about the problem and the consultation.

## Specific questions

General health—fever, systemic malaise, weight loss

Sexual function/genitalia
- —Frequency of coitus
- —Exclude erectile dysfunction, ejaculatory failure, retrograde ejaculation
- —Urethral discharge.

## Past medical history

History of undescended testes, trauma, orchitis

History of mumps, other infections—STI, TB

Chemotherapy.

### Drugs

Prescribed, OTC, drugs of abuse (e.g. anabolic steroids).

### Social history

Alcohol consumption

Smoking

Impact of current issue on relationship and self-esteem

Seek permission to examine.

### Ask for the examination findings

Pulse

BP

BMI

Gynaecomastia

Hair distribution

Abdominal examination

Genitalia, in particular size of testes (Klinefelter's syndrome), varicocoele.

### Most likely diagnosis

Subfertility.

### Differential diagnosis

Female subfertility
- —Cannot assume that it is a male problem
- —Need to address the issue as a couple.

### Investigations

Sperm count × 2—ideally fresh specimen after 3 days abstinence, 2–3 weeks apart

Consider LH, FSH and testosterone

Screening for STI and HIV.

### Advice

Discuss impact on relationship and consider need for relationship counselling

Reassurance subfertility not caused by chickenpox

Reduction in alcohol consumption needed

Timing of intercourse

Plans for follow-up with partner.

### Extra for this case

Discuss obesity

Check smoking.

## Case commentary

Infertility affects 15% of couples, and 5% of male infertility is potentially correctable. It is unrealistic in a single consultation to find the cause of the problem but Costa needs to leave this consult sensing that he is supported and that the doctor has set up a management plan.

It is important for the doctor to reassure Costa that chickenpox does not cause infertility. He is confusing chickenpox with mumps.

Hormone measurements can help determine whether the patient has gonadotropin deficiency (low testosterone and low or inappropriately normal LH and FSH), primary testicular failure (low testosterone, elevated LH and FSH), spermatogenic failure (normal testosterone and LH, elevated FSH), or androgen resistance (high testosterone, elevated LH). A majority of infertile men have normal testosterone, LH, and FSH levels. Obstruction should be ruled out in azoospermic men with normal testosterone, LH, and FSH levels. Yq microdeletions are the most prevalent cause of spermatogenic failure in men with azoospermia or severe oligozoospermia. Infertile men with azoospermia or severe oligozoospermia should undergo karyotyping and testing for Yq microdeletions.[1]



## Common pitfalls

A pitfall to avoid is agreeing with Costa that he is without doubt the cause of the problem. Brenda's previous pregnancy is not proof of current fertility. Joint consultations with the GP emphasise that this is an issue for Brenda and Costa as a couple, not just for one partner. This can be suggested for the future. The opportunities in this consultation are to conduct the physical examination and discuss problems such as Costa's drinking (alcohol can suppress spermatogenesis).

# Reference

1. Bhasin, S 2007, 'Approach to the infertile man', *Journal of Clinical Endocrinology & Metabolism*, vol. 92, no. 6, pp. 1995–2004.

# Further reading

Hirsh, A 2003, 'Male subfertility: ABC of subfertility', *British Medical Journal*, vol. 327, pp. 669–73.

Kolettis, P 2003, 'Evaluation of the subfertile man', *American Family Physician*, vol. 67, pp. 2165–73.

# Section 15 Mental health
# Case 41 Phyllis Brown

## Instructions for the doctor

This is a short case.

Please take a history from Phyllis and outline to her the most likely diagnosis. Negotiate an initial management plan with Phyllis.

**Scenario**

You have been called to see Phyllis Brown, aged 74, at home. She has not attended the practice since her husband, Ernie, died two years ago. Ernie and Phyllis were very close and did everything together. They were involved in the local bowling club and seemed almost to live there.

Ernie died suddenly of a heart attack at the club one day and Phyllis took it badly. She now relies on most of her shopping being delivered or done by her daughter. The daughter has asked for this visit as she feels that her mother needs a good checkup.

The following information is on her summary sheet:

**Past medical history**
Cholecystectomy 1989

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil known

**Social history**
Widowed
Non-smoker.

# Instructions for the patient Phyllis Brown

You are 74 years old and were widowed two years ago. You and Ernie had a good marriage and you find it hard without him. Most of the time you manage at home on your own but going out is impossible. As soon as you know you have to go out, you get anxious. Your heart races and you get diarrhoea. You start to shake and feel a lump in your throat. At times it even becomes difficult to breathe. As soon as you decide not to go out, everything calms down and you feel much better.

As a result you are staying home more and more. Life is just easier when you don't try to go out. You have adapted by using the phone to pay bills and your daughter has been good about helping with the shopping. Your daughter is concerned that you have not had a checkup with the doctor and so has persuaded the GP to do a home visit.

You would like to go out as you miss your friends but feel helpless and do not know how to get over your problems.

The following information is on your medical record:

**Past medical history**
Cholecystectomy 1989

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil known

**Social history**
Widowed
Non-smoker.

## Suggested approach to the case

Introduction, establish rapport

Open-ended questions to explore Phyllis's concerns about her situation.

### Specific questions

Establish history of agoraphobia (anxiety regarding public places)

Explore bereavement and possible prolonged grief reaction

Exclude depression

Confirm diagnosis and possible link to grief.

### Suggestions for therapy

Psychological—grief counselling, relaxation techniques, anxiety management, cognitive behavioural therapy, graded exposure

Medication –beta-blockers, selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs)

Referral to local mental health team

Mental health care plan

Plan follow-up to include review of physical health.

## Case commentary

Agoraphobia is a disabling condition that GPs may have limited experience of—the illness itself prevents sufferers from attending for help.[1] The illness can be improved with treatment.[2] Initially home visits may be the only way to provide assistance for the agoraphobia, preventive health care and the management of other acute or chronic problems.

In this case it is important for the doctor to establish rapport with Phyllis and demonstrate empathy for her problem.

Cognitive behavioural therapy (CBT) is more effective—and more cost-effective—than medication.[3] Phyllis may be able to access CBT via a Mental Health Care plan. Free online access to CBT training is another option, for example, MoodGYM (http://moodgym.anu.edu.au). Developing new skills such as mindfulness meditation can help.

SSRIs and TCAs are equal in efficacy with SSRIs more often used because of their relative lower side effect profile and safety in overdose.[1] Benzodiazepines are not recommended but may have a place in specific situations, such as enabling Mrs Brown to attend an important event such as a family wedding.

## Common pitfalls

A doctor who is not able to establish rapport with Phyllis will fail to elicit the full list of symptoms from her. This most often occurs when doctors bombard patients with questions rather than listening carefully to their story. Another pitfall is telling Phyllis that she must come to the surgery for checkups soon. This fails to recognise her illness and risks making her feel worse. Similarly, advising that she should pull herself together or that a cure is guaranteed are unrealistic and unhelpful.

Note: in the time available for a short case the doctor is unlikely to be able to give details of the treatment options as detailed above. It would be sufficient to mention referral, medication and psychological assistance.

# References

1. Shearer, S & Gordon, L 2006, 'The patient with excessive worry', *American Family Physician*, vol. 73, no. 6, pp. 1049–56.
2. Barr Taylor, C 2006, 'Panic disorders', *British Medical Journal*, vol. 332, pp. 951–5.
3. Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Panic Disorder and Agoraphobia 2003, 'Australian and New Zealand clinical practice guidelines for the treatment of panic disorder and agoraphobia', *Australian & New Zealand Journal of Psychiatry*, vol. 37, no. 6, pp. 641–56.
4. National Prescribing Service 2009, 'Which treatment for anxiety disorder?', *NPS News*, no. 65.



# Case 42 Shirley Hill

## Instructions for the doctor

This is a long case.

Please take a history from Shirley. You are expected to tell her your diagnosis and negotiate a management plan with her.

**Scenario**

A young mum, Shirley Hill, has arranged for a neighbour to look after her children so she can see a GP. She has been feeling tired all the time since the birth of her second child. She has just moved to the area. Just before she moved she went to her previous GP who did the following tests for tiredness which were all normal: FBC, ESR, UEC, TFTs, BSL, ferritin and urine for MCS.

The following information is on her summary sheet, which she brought from her previous GP:

**Past medical history**
First child 2 years ago
Second child 6 months ago

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Up to date

**Pap smear**
Normal this year

**Social history**
Ex-nurse
Husband—businessman, travels interstate regularly
Non-smoker
Alcohol intake—30 standard drinks per week recorded three years ago.

# Instructions for the patient Shirley Hill

You used to work as a nurse. You enjoyed your work as a clinical nurse consultant at a major teaching hospital. You met Bill when he was just starting up his own business. You brought in the regular income so he could spend time promoting the company before it became profitable. Over the last few years the business has thrived but has taken up more and more of his time. Because he is away so much you have had to give up your casual shifts at the local hospital.

Since the birth of your second child you have been feeling exhausted. You are getting some sleep but not as much as you need.

You are coming to see the GP to get some help with the tiredness, which is worse since your recent move. You have no friends to share child care with as you did before. Your relationship with Bill is almost non-existent because he is away so much. You don't want to admit it but often you shout at the children and spend hours wondering what's gone wrong in life. You have a beautiful home and wonderful children but feel miserable and resentful and just can't be bothered any more. If asked sensitively you will admit that you have thought that the children would be better off without you, but have not made any suicide attempts or plans.

This case is about postnatal depression.

The following information is on your medical record, which you brought from your previous GP:

**Past medical history**
First child 2 years ago
Second child 6 months ago

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Up to date

**Pap smear**
Normal this year

**Social history**
Ex-nurse
Husband—businessman, travels interstate regularly
Non-smoker
Alcohol intake—30 standard drinks per week recorded three years ago.

## Instructions for the facilitator

When the doctor asks to examine Mrs Hill, say that a full physical examination is normal and ask the doctor to continue with the scenario.

## Suggested approach to the case

Establish rapport

Open questions to explore Shirley's ideas, concerns and expectations.

### Specific questions

Mood

Tearfulness

Function and energy

Sleep

Appetite

Interest in life

Relationships including sexual

Social concerns—money, social supports

History of abuse

Use of drugs or alcohol

Brief systems review—weight changes, thirst, fever

Question about delivery, feeding and current health of baby

Sensitively explore risk of suicide

Ask about and assess the safety of the children

Past or family history of depression.

### Ask for the examination findings

All normal.

### Management

Explain most likely diagnosis—postnatal depression

Investigations—no more needed than as above

Give information about the illness

Options for treatment
- —Counselling, support groups, online psychoeducation
- —Greater interaction with community, exercise
- —Drug therapy—SSRIs first line, check if breastfeeding
- —Cognitive behavioural therapy

Discuss situation with Bill

Consider referral if not improving

Mental health plan

Arrange review.



## Case commentary

Postnatal depression is a common problem in general practice and can present with physical symptoms, particularly sleep disturbance[1] as in this case. The doctor will need to be sensitive in giving this potential diagnosis. Shirley may see this diagnosis as confirmation of her self-perceived failure in life or have strong reasons from her work as a nurse to deny that this is the problem.

The doctor needs to assess the severity of the depression, consider Shirley's safety and the safety of the children, and then negotiate with Shirley regarding the different management options.[2, 3] The doctor can be optimistic that the situation will improve but must be realistic that it will take time.



## Common pitfalls

A poor or inexperienced doctor will miss that this is postnatal depression and organise further tests or a specialist referral to chase a physical cause for the tiredness.[4] This is an inappropriate use of resources and denies Shirley access to the assistance she needs to improve her mental health and the short-term and long-term health of her children.[2]

# References

1. Berk, M 2009, 'Sleep and depression: theory and practice', *Australian Family Physician*, vol. 38, no. 5, pp. 302–4.
2. Buist, A 2006, 'Perinatal depression: assessment and management', *Australian Family Physician*, vol. 35, no. 9, pp. 670–3.
3. Musters, C, McDonald, E & Jones, I 2008, 'Management of postnatal depression', *British Medical Journal*, vol. 337, p. a736.
4. Clarke, DM, Pitermann, L & Byrine, CL et al. 2008, 'Somatic symptoms, hypochondriasis and psychological distress: a study of somatisation in Australian general practice', *Medical Journal of Australia*, vol. 189, no. 10, pp. 560–4.



# Case 43 Monica Middlethorpe

## Instructions for the doctor

This is a short case.

Please take a history and suggest your management plan to Monica. You are Monica's usual GP.

**Scenario**

Monica Middlethorpe is 36 years old and comes to see you for assistance with claustrophobia. She is planning a trip to Europe and is worried about the flight.

**Past medical history**
Asthma

**Medication**
Fluticasone/Salmeterol 250 mcg/25 mcg per dose (Seretide) inhaler 1 puff twice daily
Salbutamol 100 mcg/dose (Ventolin) inhaler 2 puffs as required

**Allergies**
Nil

**Immunisations**
Nil recorded

**Family history**
Nil recorded

**Social history**
Administrative assistant (ex tour guide)
Non-smoker.

# Instructions for the patient Monica Middlethorpe

You are 36 years old. You work as an administrative assistant and used to be a tour guide.

You now get anxious when in enclosed spaces. It starts with butterflies in your stomach, then your chest feels tight, your heart races, you feel frightened and you have a strong urge to run out into an open space. You recently flew interstate and your husband had to talk to you sternly to get you on the plane. You drank a couple of glasses of wine in the bar before take-off and somehow managed to fly.

You are planning a trip to Europe and are worried about the flight. You have come to see your usual GP for help.

If the doctor asks sensitively you will reveal that three years ago you had an asthma attack when leading a tour group in a cave. You did not have any salbutamol with you.

The following information is on your medical record:

**Past medical history**
Asthma

**Medication**
Fluticasone/Salmeterol 250 mcg/25 mcg per dose (Seretide) inhaler
1 puff twice daily
Salbutamol 100 mcg/dose (Ventolin) inhaler 2 puffs as required

**Allergies**
Nil

**Immunisations**
Nil recorded

**Family history**
Nil recorded

**Social history**
Administrative assistant (ex tour guide)
Non-smoker.

## Suggested approach to the case

Establish rapport

Explore Monica's ideas, concerns and expectations.

### Assessment of the problem

Ask about recent event on flight

Sensitively probe for possible precipitating event

Explain correlation between significant event and current symptoms

Exclude underlying generalised anxiety or depression or substance misuse.

### Management

Reassure that can be assisted

Short term—can use benzodiazepines for specific situations but risk of addiction, not suitable for long-term use

Longer term—cognitive behavioural therapy

Review or arrange for review of chronic disease
—Asthma control, inhaler technique
—Need for flu vaccine.



## Case commentary

Monica describes anxiety attacks when in confined spaces (claustrophobia) that started when she was underground and had an asthma attack without having her inhaler nearby. Since that incident she has changed jobs and avoided closed spaces whenever possible. However, she now has the chance to travel and does not want to miss out.

In the short term benzodiazepines are effective anxiolytic drugs. But patients can become reliant on them and so alternative ways to manage the anxiety in the long term are preferred.[1] Cognitive behavioural therapy is the treatment of choice and can be offered by trained GPs[2] or via referral to a psychologist, either privately or after completion of a GP Mental Health Care plan.[3]

Anxiety is common and disabling with an estimated 1.6 million presentations to Australian GPs per year.[4] It is important for the doctor to establish that Monica's anxiety is specific to a situation and is not part of a more pervasive mental health problem. Strategies used to cope with anxiety include 'self-medicating' with alcohol or illegal drugs such as

marijuana, or avoidance of likely precipitating events or functions. It is worth checking that Monica's couple of drinks prior to her most recent plane trip was a one-off, not a routine part of life, and assessing how much she has altered her life to avoid an anxiety attack.

## Common pitfalls

Beta-blockers can be effective in reducing the physical symptoms of anxiety and are a useful first line therapy EXCEPT in asthmatics like Monica, for whom they can cause fatal bronchoconstriction.

# References


1. Ellen, S, Selzer, R & Norman, T et al. 2007, 'Depression and anxiety: pharmacological treatment in general practice', *Australian Family Physician*, vol. 36, no. 4, pp. 222–8.
2. Edelman, S & Blashki, G 2007, 'Managing anxious patients: cognitive behaviour therapy in general practice', *Australian Family Physician*, vol. 36, no. 4, pp. 212–14, 217–20.
3. Commonwealth Department of Health and Ageing 2009, *Better access to psychiatrists, psychologists and general practitioners through the MBS Medicare Benefits Schedule: explanatory notes—GP mental health care items*, 19 January 2009 edn, www.health.gov.au/internet/main/publishing.nsf/Content/pacd-gp-mental-health-care-pdf-explan, accessed 28 June 2010.
4. Charles, J, Britt, H & Fahridin, S et al. 2007, 'Mental health in general practice', *Australian Family Physician*, vol. 36, no. 4, pp. 200–1.



# Case 44 Tom Newton

## Instructions for the doctor

This is a short case.

**Scenario**

Last week you were on call and admitted Tom Newton to the local mental health unit. Tom is 20, lives with his parents and is in second year Engineering at university.

Tom's parents called you as his behaviour was markedly disturbed; they suspect Tom has been using street drugs. For the previous week the television had been telling Tom that it was his role to save the world from itself. When Tom said that the TV had told him that he had to die to save the world, his parents sought help.

The hospital has told Tom's parents that he has had an acute psychosis.

Tom's mother has made this appointment to talk with you about psychosis; she has heard from a friend that Tom is at risk of schizophrenia.

# Instructions for Tom's mother Ann Newton

You are nearly 60 years old and about to retire from your position as a school secretary. When you retire you are planning to travel round Australia.

Your eldest daughter is married and lives nearby. Tom, your son, is 20 and still at home. He is in his second year of an engineering degree. Some of Tom's university friends seem weird to you and you suspect Tom has been trying illicit drugs.

Over the past few weeks Tom's behaviour had become increasingly worrying—he was saying that the television wanted him to save the world. When Tom announced that the TV had told him that he had to die to save the world, you and your husband decided to take Tom to the local GP.

Tom was admitted to the mental health unit at the hospital. The psychiatrist has said that Tom has had an acute psychosis. A friend told you that acute psychosis can lead to schizophrenia. You have made this appointment with the GP to find out more about this illness. You are likely to ask the following questions:

- What is an acute psychosis?
- What is schizophrenia?
- Can it be cured?
- What causes it?
- Was it my fault?
- What will happen to Tom now?
- Will I still be able to go round Australia as planned?

## Suggested approach to the case

Establish rapport

Enquire about Tom's mother's ideas, concerns and expectations re acute psychosis and schizophrenia

Not clear diagnosis as yet—one psychotic episode is not diagnostic of schizophrenia, but acknowledge that Tom is at risk of schizophrenia

Explain that you can only talk in general terms, not specifically about Tom, because of confidentiality requirements

Target answers to Ann's concerns
- —Dispel myths, e.g. not split personality

Diagnostic features
- —Gradual change (prodrome usually about two years)
- —Changes in thinking, mood and behaviour

Positive symptoms
- —Hearing voices or seeing things that are not there (hallucinations)
- —Feeling controlled by someone or something else (passivity phenomena)
- —Believing things to be true that are not (delusions)
- —Thought disorders

Negative symptoms
- —Abnormal affect
- —Talking less (poverty of speech and poverty of content of speech)
- —Reduced motivation
- —Social withdrawal

Causes
- —Multifactorial, combination of genetic susceptibility and environmental factors
- —Link with illicit drugs, cannabis and amphetamines

Advise of improved outcomes with early intervention

Advise of current therapies

Treatment
- —Aim to reduce symptoms, prevent relapse, early intervention of relapse
- —Antipsychotics

—Family support
—Community mental health team

Acknowledge any emotional response, e.g. shock and sadness

Assure Ann of your ongoing interest and support, and support groups for families caring for the mentally ill

Acknowledge planned trip around Australia, too early to make definite decision, continue to make plans to go.

## Case commentary

Acute psychosis is frightening to see for all involved. Tom's and his family's world has suddenly changed; Ann needs support and space to express her concerns and adjust to the new situation. Ann also needs help trying to decide what to do about her plans for travelling around Australia after retirement.

Without Tom's permission the GP cannot give specific information to Ann but instead has to give general advice. But there is still plenty to say, and the GP should use this as an opportunity to let Ann vent her concerns.

Medicine's understanding of psychosis and schizophrenia is at an exciting stage. Early intervention can help people maintain cognitive and social function. Cautious optimism is appropriate, particularly if Tom is able to stay off illicit drugs.

## Common pitfalls

In practice, especially when as a GP you care for whole families, it can be hard to remember who has given permission for you to say what to whom. Things can never be 'unsaid' so if anything, it is wise to be cautious rather than overly open. Conversely, saying nothing at all is unhelpful as evidence suggests that Tom will do best if he has his family's support.

The following are recommended reading for more information on this topic.

# Further reading

Berger, G, Fraser, R & Carbone, S et al. 2006, 'Emerging psychosis in young people. Part 1: Key issues for detection and assessment', *Australian Family Physician*, vol. 35, no. 5, pp. 315–21.

Blashki, G, Keks N & Stocky, A et al. 2004, 'Managing schizophrenia in general practice', *Australian Family Physician*, vol. 33, no. 4, pp. 221–7.

Fraser, R, Berger, G & McGorry, P 2006, 'Emerging psychosis in young people. Part 2: Key issues for acute management', *Australian Family Physician*, vol. 35, no. 5, pp. 323–7.

Fraser, R, Berger, G & Killackey, E et al. 2006, 'Emerging psychosis in young people. Part 3: Key issues for prolonged recovery', *Australian Family Physician*, vol. 35, no. 5, pp. 329–33.

Lubman, DI & Sundram, S 2003, 'Substance misuse in patients with schizophrenia: a primary care guide', *Medical Journal of Australia*, vol. 178 supplement, pp. S71–5.

McGorry, PD, Killackey, E & Yung, AR 2007, 'Early intervention in psychotic disorders: detection and treatment of the first episode and the critical early stages', *Medical Journal of Australia*, vol. 187, no. 7 supplement, pp. S8–10.

'Pathways to schizophrenia' 2009, *Medical Journal of Australia*, Supplement, 16 February.

# Section 16 Musculoskeletal medicine

# Case 45 Anthony Campbell

## Instructions for the doctor

This is a short case.

**Scenario**

Anthony Campbell is a 46-year-old Aboriginal man who is complaining of pain in his foot. He sprained his ankle when he was leaving a council meeting a few months ago. For the last few weeks he has experienced pain first thing in the morning and after standing or walking for a period of time.

Please take a history from Anthony and conduct a focused examination. Outline the most likely diagnosis and your proposed management to the observing examiner.

The following information is on Anthony's summary sheet at your suburban general practice:

**Past medical history**
Hypertension

**Medication**
Ramipril 5mg od

**Allergies**
Nil known

**Immunisations**
Nil recorded

**Family history**
Nil known

**Social history**
Married
Works as finance officer for local town council.

# Instructions for the patient Anthony Campbell

You are a 46-year-old Aboriginal man. You work as finance officer for the local council. You have come to see the GP today because of a pain in your right heel. The pain is worse first thing in the morning or after a period of sitting down, and occurs when you put your heel down. The pain eases after you have been up for a while, but it gets worse after walking any distance. It is worse when you walk around barefoot.

The pain is getting worse not better. You first noticed it a few weeks ago.

A few months ago you sprained your ankle when coming out of a council meeting late at night. You wonder if the two problems are connected (they turn out not to be).

The following information is on your medical record:

**Past medical history**
Hypertension

**Medication**
Ramipril 5mg once a day

**Allergies**
Nil known

**Immunisations**
Nil recorded

**Family history**
Nil known

**Social history**
Married
Works as finance officer for local town council.

# Suggested approach to the case

Introduction

Establish rapport.

## History

Use open questions to explore Anthony's ideas, concerns and expectations.

## Specific questions

Location of the pain—plantar fascia insertion right foot

Duration of the pain

Timing

What's been tried so far?

Injury to ankle—sprain after council meeting, location of current pain suggests no connection

Exclude other musculoskeletal/systemic symptoms

Request permission to examine.

## Examination

Height 1.85 m

Weight 99 kg

BMI 29 kg/m$^2$

Expose both feet and ankles to the knees

**Look**

—Alignment and range of movement normal
—No scars or skin changes
—Observe gait—some pain on putting down right heel

**Feel**

—Acutely tender right calcaneum at insertion of plantar fascia
—No other tenderness or increased temperature

**Move**

—Normal foot and ankle movements
—No excess joint laxity.

### Most likely diagnosis

Plantar fasciitis.

### Management

Explanation

Reassurance not caused by ankle injury

Treatment

—Stretching exercises—of plantar fascia and Achilles tendon
—Arch supports and heel cushions
—Ice
—Non-steroidal anti-inflammatory medication
—Avoid walking barefoot or wearing flat shoes

If not settling consider referral/steroid injection or trial of custom-made night splints.



## Case commentary

It is important to take the history of the recent fall but to realise that this is not the actual cause of the problem, and explain this to Anthony. Plantar fasciitis is a clinical diagnosis that does not require further investigation.[1] The presence or absence of heel spurs is not helpful in diagnosing plantar fasciitis; X-rays are only needed if other diagnoses seem likely.

Most patients with plantar fasciitis improve with conservative or no therapy.[2] Anthony can be advised to try shoe inserts and stretching of the plantar fascia. Ice may be worth a try, but his higher risk of renal disease suggests caution with non-steroidal anti-inflammatories. Custom-made orthotics and night splints may help,[3] as may shock therapy and steroid injections though these may risk longer term tendon rupture. Steroid injections are very painful and so an ankle block can be used. Failed initial treatment is an indication for specialist surgical referral.[4] Some cases persist despite surgery.

Anthony may benefit from encouragement on exercise he can do that will not exacerbate his heel pain, such as cycling or swimming. Losing weight will reduce the load on the ankle and can help. A good candidate will arrange follow-up to check Anthony's blood pressure, BMI, other cardiac risk factors and immunisation status.

# References

1. Cole, C, Seto, C & Gazewood, J 2005, 'Plantar fasciitis: evidence-based review of diagnosis and therapy', *American Family Physician*, vol. 72, no. 11, pp. 2237–42.
2. Buchbinder, R 2004, 'Clinical practice. Plantar fasciitis', *New England Journal of Medicine*, vol. 350, no. 21, pp. 2159–66.
3. Lee, SY, McKeon, P & Hertel, J 2009, 'Does the use of orthoses improve self-reported pain and function measures in patients with plantar fasciitis? A meta-analysis', *Physical Therapy in Sport*, vol. 10, no. 1, pp. 12–18.
4. Neufeld, SK & Cerrato, R 2008, 'Plantar fasciitis: evaluation and treatment', *Journal of the American Academy of Orthopaedic Surgeons*, vol. 16, no. 6, pp. 338–46.

# Case 46 Martin Chatterjee

## Instructions for the doctor

This is a short case.

**Scenario**

Martin Chatterjee is a 48-year-old office manager who does little regular exercise. Last week he played Masters' cricket and scored a career best of 32 runs. Since then he has had pain in his left (non-dominant) shoulder. He is finding it difficult to move his left arm and to sleep as the pain wakes him up whenever he tries to move. He has applied ice and is taking paracetamol at night. This is his first experience of a shoulder problem.

Please do a focused clinical examination. You are not required to take any further history. Tell the examiner your examination findings, your differential diagnosis and initial plans for management.

The following information is in Martin's medical record:

**Medical history**
Type 2 diabetes diagnosed two years ago
Height 1.85 m
Weight 106 kg
BMI 31 kg/m$^2$
Waist circumference 95 cm

**Medication**
Metformin 500 mg bd
Paracetamol 500 mg two nocte

**Allergies**
Nil

**Social history**
Office manager
Stopped smoking two years ago.

# Instructions for the patient Martin Chatterjee

You are a 48-year-old office manager who does little regular exercise. Last week you played Masters' cricket and scored a career best of 32 runs. Since then you have had pain in your left (non-dominant) shoulder. It is difficult to move your left arm and to sleep as the pain wakes you up whenever you try to move. You have applied ice and are taking paracetamol at night. This is your first experience of a shoulder problem.

The following information is on your medical record:

**Medical history**
Type 2 diabetes diagnosed two years ago
Height 1.85 m
Weight 106 kg
BMI 31 kg/$m^2$
Waist circumference 95 cm

**Medication**
Metformin 500 mg bd
Paracetamol 500 mg two nocte

**Allergies**
Nil

**Social history**
Office manager
Stopped smoking two years ago.

Please come to the session wearing a shirt that buttons all the way down the front. You will struggle to take your shirt off because of the pain in your left shoulder.

You have no bony tenderness. You have difficulty abducting your left shoulder. When the doctor gets your shoulder beyond the 120° angle you can then raise your arm and the pain eases.

All other shoulder movements are normal.

## Instructions for the facilitator

Please report to the doctor that neck movements and axillae are normal when they start to examine these. This is to save time.

## Suggested approach to the case

Introduction

Brief summary of the case by the candidate leading to request to examine the patient.

### Examination

Ask patient to remove shirt completely and observe for pain and restricted movement.

**Look**

Inspect anterior and posterior for

- —Asymmetry—expect non-dominant shoulder to be higher than dominant
- —Bruising
- —Scars
- —Muscle wasting

**Feel**

Bones and joints

- —Sternoclavicular joint
- —Clavicle
- —Acromioclavicular joint
- —Glenohumeral junction
- —Humerus
- —Scapula

Muscles and tendons

- —Supraspinatus tendon
- —Supraspinatus and infraspinatus muscles
- —Long head of biceps

**Move**

- —Forward flexion
- —Abduction—difficult to initiate abduction, painful arc between 60° and 120°
- —Extension
- —Internal rotation

—External rotation
—Neck movements and axillae (facilitator report to doctor results are normal to save time)

Repeat with movement resisted
—Finding: pain on resisted abduction suggesting supraspinatus problem
—Test supraspinatus—resist abduction with thumb pointing upwards
—Test infraspinatus—resist abduction with thumb pointing downwards.

## Apprehension test

Patient lying down, supine, arm externally rotated with elbow flexed to 90°.

## Differential diagnosis

Most likely diagnosis—supraspinatus tendonopathy causing impingement (candidate will still score a pass if says rotator cuff inflammation)

Consider rotator cuff tear

Unlikely but to consider lung tumour—previous smoker.

## Management

Continue rest, ice

Analgesia

Explain—inflammation should settle and resolve

Physiotherapy

Prevent frozen shoulder (more common in diabetics)[1]

Discuss safety driving

Need for certification for work

No indication for other investigations at this stage, do CXR if pain persists/worsens

Follow up, encourage continued fitness and weight loss and monitor diabetes

Consider subacromial corticosteroid injection if symptoms persist.[2]

## Case commentary

Shoulder pain is common in general practice. Most commonly the pain is musculoskeletal in origin but it can also signify serious visceral pathology. GPs must be able to conduct a thorough shoulder examination, report their findings clearly and synthesise the information from the history and examination to form a differential diagnosis.[3]

## Common pitfalls

Finding pathology on ultrasound is common and does not necessarily correlate well with the clinical picture. Research suggests that GPs are over-reliant on investigations.[4] In many cases a focused but thorough history and examination provide sufficient information to form a differential diagnosis and a management plan.[5]

# References


1. Bhargav, D & Murrell, GA 2004, 'Shoulder stiffness: diagnosis', *Australian Family Physician*, vol. 33, no. 3, pp. 143–7.
2. Arroll, B & Goodyear-Smith, F 2005, 'Corticosteroid injections for painful shoulder: a meta-analysis', *British Journal of General Practice*, vol. 55, no. 512, pp. 224–8.
3. Masters, S & Burley, S 2007, 'Shoulder pain', *Australian Family Physician*, vol. 36, no. 6, pp. 414–16.
4. Awerbuch, MS 2008, 'The clinical utility of ultrasonography for rotator cuff disease, shoulder impingement syndrome and subacromial bursitis', *Medical Journal of Australia*, vol. 188, no. 1, pp. 50–3.
5. Johal, P, Martin, D & Broadhurst, N 2008, 'Managing shoulder pain in general practice: assessment, imaging and referral', *Australian Family Physician*, vol. 37, no. 4, pp. 263–5.



# Case 47 Sarah Cosgrove

## Instructions for the doctor

This is a short case.

Please examine Mrs Cosgrove who presents with hip pain and report your findings to the facilitator. Outline the most likely diagnosis to the facilitator and your initial plans for management.

**Scenario**

Mrs Cosgrove is 71 years old and has come to see you complaining of pain in her right hip. This pain has been gradually getting worse over the past few years. The pain is beginning to interfere with her daily activities and she gets some stiffness after she has rested. She still cycles to do her shopping.

Mrs Cosgrove has pain in both first metacarpophalangeal joints, both knees and her neck.

The following information is on her summary sheet:

**Past medical history**
Appendicectomy as a child

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal one year ago

**Social history**
Married
Two children, one overseas
Alcohol—2 standard drinks per week
Non-smoker.

# Instructions for the patient Sarah Cosgrove

You are a 71-year-old retired personal assistant. You have always been active and still cycle to do your shopping. You have come to see the GP today because of pain in your right hip. This pain has been gradually getting worse over the past few years. The pain now interferes with your daily activities and you experience some stiffness after resting.

You also have pain in both first metacarpophalangeal joints, both knees and your neck.

Both your older brothers have had hip replacements because of osteoarthritis. You suspect this is what you have but you are concerned about possible surgery because one of the brothers had serious postoperative complications and nearly died.

## Clinical examination findings

On examination you will demonstrate slight tenderness on palpation over the greater trochanter of the right hip and reduced hip movement on abduction, internal rotation and extension. When the doctor asks to examine your back, other hip and knees please report that this is not necessary.

The following information is on your medical record:

**Past medical history**
Appendicectomy as a child

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal one year ago

**Social history**
Married
Two children, one overseas
Alcohol—2 standard drinks per week
Non-smoker.

# Information for the facilitator

### Alternative scenario

The doctor is told that Mrs Cosgrove has osteoarthritis of the right hip. They are required to focus on management. The emphasis would be on ensuring Mrs Cosgrove understands the problem and chooses with the doctor the options for treatment. The doctor should notice hesitation when surgery is discussed and explore the rationale for her concern.

# Suggested approach to the case

Introduction

Request permission to examine.

### Examination

BMI 26 kg/m$^2$

Gait

Posture, look for Trendelenburg's sign

**Look**
Check for scars, swelling, deformity

**Feel**
Movement
—Active then passive
—Abduction/adduction
—Rotation internal and external
—Flexion/extension.

### Most likely diagnosis

Osteoarthritis of hip.

### Management

Aim to minimise pain and maintain function

Maintain fitness and exercise

Symptomatic treatment
—Analgesia—paracetamol as first line
—Glucosamine

Physiotherapy, acupuncture, hydrotherapy, walking stick

Referral for joint replacement when pain is intractable

Arrange follow-up.



## Case commentary

The doctor needs to establish a rapport with Mrs Cosgrove and request permission to examine her. Some doctors I've watched have achieved this by briefly summarising the story to show Mrs Cosgrove that they understand what the issues are.

The doctor must conduct the examination efficiently, moving with ease from one aspect to the next and not cause unnecessary pain. The examination should appear as a well-rehearsed routine; it is obvious to observers when doctors are thinking what to do next rather than being able to focus on the findings and their interpretation.

The most likely diagnosis is osteoarthritis of the right hip. The doctor should suggest a range of pharmaceutical, surgical and non-pharmaceutical options for treatment.

# Further reading

Grainger, R & Cicuttini, FM 2004, 'Medical management of osteoarthritis of the knee and hip joints', *Medical Journal of Australia*, vol. 180, no. 5, pp. 232–6.

Lane, NE 2007, 'Clinical practice. Osteoarthritis of the hip', *New England Journal of Medicine*, vol. 357, no. 14, pp. 1413–21.

# Case 48 Jeremy King

## Instructions for the doctor

This is a short case.

You are expected to conduct this consultation as you would in your clinical practice.

**Scenario**

Jeremy King is a 25-year-old plumber who comes to see you for review following a car accident. He was driving to work when a truck went very slowly into the back of his car while he was stationary at traffic lights. He attended the hospital emergency department where he was examined. The doctor did not think X-rays were needed and only did them following pressure from Jeremy. No fractures were identified.

It is now a week after the accident and Jeremy has returned for review. The brake and indicator light of Jeremy's work ute needed replacement but otherwise it was fine.

The following information is on his summary sheet:

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil recorded

**Social history**
Self-employed plumber.

# Instructions for the patient Jeremy King

You are a 25-year-old self-employed plumber. The business has been going badly and you have been getting increasingly tired at work. You have wanted to take time out of work but cannot afford to.

Last week you were driving to work when a truck went very slowly into the back of your car while you were stationary at traffic lights. You attended the hospital emergency department where you were examined. The doctor said that you did not need X-rays but you insisted that they to do some; no fractures were identified.

It is now a week after the accident and you have come to see your GP for review. The brake and indicator light of your work ute needed replacement but otherwise it was fine.

The truck driver's insurance company has already arranged for the repairs to your car, so you could get back to work next week. You have had one week off but want to take more time out. Your neck was a bit sore after the accident and you get mild pain at the end of the day. You have no other residual symptoms.

You want the GP to sign you off for more sick leave.

## Clinical examination findings

Clinical examination is normal. There is a full range of pain-free neck movement.

The following information is on your medical record:

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil known

**Immunisations**
Nil recorded

**Social history**
Self-employed plumber.

## Suggested approach to the case

Establish rapport

Open-ended questions to establish Jeremy's ideas, concerns and expectations about this consultation.

### Specific questions

Further history regarding neck pain
—Interference with sleep
—Treatment so far

Enquire about other associated symptoms, such as headache, paraesthesiae

Explore potential impact of neck pain on work as a plumber

Request permission to examine neck.

### Examination

**Look**
Normal

**Feel**
No bony tenderness

**Move**
Full range of movement.

### Management

Explain whiplash, reassure that will resolve, no benefit from further time off

Suggest physiotherapy, simple analgesics

Empathise re business problems

A good doctor will also explore whether Jeremy smokes, drinks or uses drugs.

## Case commentary

This case tests the GP's applied professional knowledge and skill and also their professional and ethical role. The car accident and resulting insurance claim have given Jeremy his first paid time off in years. He is still tired and he thinks that more paid leave from the truck driver's insurance company would really help him.

A clinical assessment of the neck injury is required plus a decision about whether further sick leave is indicated. The minimal residual pain and absence of physical signs demonstrate that Jeremy is fit to return to work. The doctor must avoid collusion and signing Jeremy off for unjustified further sick leave. Timely return to activity is important to prevent chronic symptoms[1] and to be fair to the insurance company.

The GP will need to make Jeremy feel supported and understood with regard to his injury and his business pressures but at the same time be clear that there is no justification for further sick leave. The GP can offer follow-up about the accident, the business pressures and preventive health.

## Reference

1. Albert, E, Francis, H & Elkerton, A 2003, 'Whiplash: still a pain in the neck', *Australian Family Physician*, vol. 32, no. 3, pp. 152–7.



# Case 49 Geoff Sharp

## Instructions for the doctor

This is a short case.

Please take a history from Geoff and conduct an appropriate focused examination. Outline to the facilitator your findings and suggestions for management.

**Scenario**

Geoff Sharp is a 54-year-old teacher. His wife has booked this appointment as she is fed up with listening to him complain about a pain in his right elbow. He says that he cannot make her cups of tea, as he can't pour the kettle.

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil recorded

**Immunisations**
Up to date

**Social history**
Nil recorded

# Instructions for the patient Geoff Sharp

You are a 54-year-old teacher. Normally you are fit and well and do not go to the doctor. For the last few weeks you have noticed a pain in your right elbow. This makes it hard to carry books at school and you experience pain when trying to pour the kettle.

You have not sustained an injury to the elbow but do remember that the pain came on after you had spent the weekend gardening.

You have tried some paracetamol but it did not make much difference.

## Clinical examination findings

You will demonstrate pain on pressure over the right lateral epicondyle and on active extension of the wrist. You have tennis elbow—extensor tendinitis.

The following information is on your medical record:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil recorded

**Immunisations**
Up to date

**Social history**
Nil recorded

## Suggested approach to the case

Establish rapport

Open questions to establish Geoff's ideas, concerns and expectations.

### Specific questions

Duration of pain

Onset of pain

Precipitants of pain

General health

Treatment so far

Impact of problem on Geoff's life

Request permission to examine.

### Examination

Ensure full view of both arms

**Look**

—Exclude deformity or swelling
—Muscle mass

**Feel**

—Elicit tenderness
—Exclude temperature

**Move**

—Test range of movement of elbow joints—active, then passive
—Flexion, extension and pronation/supination
—Test movement against resistance

Pain is maximal on wrist extension against resistance.

### Diagnosis

Tennis elbow—extensor tendonitis.

### Management

Education about the diagnosis

Rest

Range of treatment options starting with least invasive[1, 2]
- —Wringing exercises[3, 4]
- —Topical non-steroidal anti-inflammatory drugs
- —Oral non-steroidal anti-inflammatory drugs—exclude contraindications prior to recommendation
- —Support bandage—epicondylitis brace
- —Referral for physiotherapy, ultrasonography treatment
- —Steroid/local anaesthetic injection[5]
- —Surgery tendon transfer

Occupational therapy review of work situation

Advice about the safety of driving

Arrange follow-up

If time allows, discuss preventive health measures such as smoking, blood pressure, exercise, diet, alcohol consumption, immunisation status.



## Case commentary

Geoff's symptoms should suggest the diagnosis to the doctor almost before the scenario begins. The doctor can then demonstrate their skills by excluding other serious pathology, and clinch the diagnosis by identifying the epicondylar pain and reproduction of the pain on active resistance to wrist extension.

A good doctor will give a clear explanation of the problem in simple terms and then outline the options for treatment, carefully excluding any pre-existing contraindications. Tennis elbow is considered to be an overload injury, typically presenting after minor and often unrecognised trauma of the extensor muscles of the forearm.[2] As the evidence on the best treatment for tennis elbow is limited, it is important to involve Geoff in the decision regarding treatment. Steroid injection can give rapid pain relief in the short term but long-term evidence is less clear.[5]



## Common pitfalls

There is time to complete the history, examination and management but only if the doctor focuses on the elbow. A poor doctor might be unnecessarily extensive with history-taking and examination, leaving no time for discussion regarding management. No investigations are needed for this diagnosis, nor is early referral to an orthopaedic surgeon.

# References

1. Buchbinder, R, Green, S & Struijs, P 2007, 'Tennis elbow', *American Family Physician*, vol. 75, no. 5, pp. 701–2.
2. Johnson, GW, Cadwallader, K & Scheffel, SB et al. 2007, 'Treatment of lateral epicondylitis', *American Family Physician*, vol. 76, no. 6, pp. 843–8.
3. Murtagh, J 2007, *General practice*, 4th edn, McGraw-Hill, Sydney, pp. 683–5.
4. American Academy of Family Physicians 2007, 'Information from your family doctor. Exercises for tennis elbow', *American Family Physician*, vol. 76, no. 6, pp. 849–50.
5. Xu, B & Goldman, H 2008, 'Steroid injection in lateral epicondylar pain', *Australian Family Physician*, vol. 37, no. 11, pp. 925–6.



# Case 50 Mick Shaughnessy

## Instructions for the doctor

This is a short case.

Please take a history from Mick and conduct an examination. Report your findings and outline your diagnosis and management plan to the facilitator.

**Scenario**

Mick Shaughnessy is a 45-year-old social worker who plays soccer at weekends. He played professional soccer for a few years in his early twenties.

Five days ago Mick hurt his left knee during a match. He fell and twisted the knee. Mick heard a popping sound. Since then it has been painful to bend the knee. When he bends the knee it feels as though it might give way.

The following information is on his summary sheet:

**Past medical history**
Fracture collarbone 1984

**Medication**
Nil

**Allergies**
Nil known

**Social history**
Social worker.

# Instructions for the patient Mick Shaughnessy

You are a 45-year-old social worker who plays soccer at weekends. You played professional soccer for a few years in your early twenties.

Five days ago during a match you hurt your left knee. You fell and twisted the knee and heard a popping sound. The next morning the knee was swollen. It is painful to bend the knee. When you bend the knee it feels as though it might give way.

The most likely diagnosis is a tear of the medial meniscus of the left knee.

## Clinical examination findings

On examination there is mild swelling but no deformity of the knee. There is a small effusion (role player please tell the doctor this when they do appropriate tests for an effusion). There is tenderness over the medial joint line, McMurray's sign in the left knee on the medial side and pain medially on the grind test.

The following information is on your medical record:

**Past medical history**
Fracture collarbone 1984

**Medication**
Nil

**Allergies**
Nil known

**Social history**
Social worker.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Mick's ideas, concerns and expectations.

### Specific questions

Confirm how injury occurred, any audible noise, e.g. a 'pop'

Location of pain

Duration of pain

History of swelling

Current symptoms

Check if any history of locking, giving way

Exclude pain in the hip, thigh or back

Treatment so far

Request permission to examine.

### Examination

Expose both legs

**Look**
Observe walk

Knee joint—deformity, swelling

Muscle bulk, scars

**Feel**
Joint tenderness, temperature, nature of swelling if present, demonstrate effusion

**Move**
Active movements—flexion/extension

Passive movements—flexion/extension

Stability
—Medial and lateral collateral ligaments
—Lachman test for cruciate ligaments

Specific tests
—McMurray's test +/–, Apley's grind test for meniscal injury.

### Differential diagnosis

Most likely diagnosis is a tear of the medial meniscus

Other possibilities—loose body in knee, osteoarthritis, medial collateral ligament strain.

### Management

Explain probable diagnosis

Advise rest

Analgesia

Paracetamol

NSAIDs—avoid immediately after injury

Support bandage

Refer for MRI + arthroscopy depending on MRI result[1]

Physiotherapy referral—to strengthen quadriceps muscles

Sensitive advice about changing sport

Discussion re safety driving and impact on work

Arrange follow-up

Offer health promotion appointment.

## Case commentary

Mick has probably injured his cartilage in a fall playing soccer. The doctor should have a clear idea that this is the most likely problem from the history before entering the room. Further history should be taken to confirm this as the most likely problem. The doctor should then proceed to demonstrate a thorough knee examination in the order of look, feel and move.

All doctors should be able to systematically examine a joint. Practice is needed to ensure that the examination is neither too rough nor too gentle. It is acceptable to elicit some tenderness but not agony!

### McMurray's sign

Ask the patient to lie supine on an examination couch. Test one side at a time. Flex the hip and knee maximally. Apply a valgus (abduction) force to the knee while externally rotating the foot and passively extending the knee. An audible or palpable snap during extension suggests a tear of the medial meniscus. For the lateral meniscus, apply a varus (adduction) stress during internal rotation of the foot and passive extension of the knee.[2]

## References

1. Robb, G, Reid, D & Arroll, B et al. 2007, 'General practitioner diagnosis and management of acute knee injuries: summary of an evidence-based guideline', *New Zealand Medical Journal*, vol. 120, no. 1249, pp. 2419–542.
2. Jackson, JL, O'Malley, PG & Kroenke, K 2003, 'Evaluation of acute knee pain in primary care', *Annals of Internal Medicine*, vol. 139, no. 7, pp. 575–88.



# Case 51 Susan Smith

## Instructions for the doctor

This is a short case.

You are expected to conduct an appropriate physical examination and report your findings and the most likely diagnosis to the facilitator. You are not expected to take any further history.

**Scenario**

Mrs Susan Smith is a 39-year-old solicitor. She has come to you about her lower back pain, which she has had for two weeks. She had a similar pain when she was pregnant with her two children. This time the pain came on after she had been playing netball. For the last week she has noticed a sharp pain down the back of her right leg which goes right down to her ankle. This is worse on coughing or sneezing. She has no bladder or bowel disturbance.

The following information is on her summary sheet.

**Past medical history**
Back pain during pregnancy

**Medication**
Etonogestrel intra-uterine implant 6 months ago (Mirena)

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal this year

**Social history**
Divorced
Non-smoker
Alcohol—2 standard drinks each Friday and Saturday night.

# Instructions for the patient Susan Smith

You are a 39-year-old solicitor. For the past two weeks you have had lower back pain. You had a similar pain when you were pregnant. In the last week you have noticed a sharp pain down the back of your right leg which goes right down to your ankle. This is worse on coughing or sneezing. You have no bladder or bowel disturbance.

The pain came on after a game of netball.

## Clinical examination findings

Normal findings except:

—Forward flexion limited—finger tips can reach knees only
—Right lateral flexion less than left lateral flexion
—Mild discomfort on pressure over L5/S1 disc space
—Straight leg raise on right limited to 60°
—Positive slump test, Lasegue's sign and Kernig's sign
—Squatting exacerbates pain.

The following information is on your medical record:

**Past medical history**
Back pain during pregnancy

**Medication**
Etonogestrel intra-uterine implant 6 months ago (Mirena)

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal this year

**Social history**
Divorced
Non-smoker
Alcohol—2 standard drinks each Friday and Saturday night.

# Suggested approach to the case

Establish rapport

Clarify site of pain

Request permission to conduct examination and undress the patient appropriately down to underwear.

## Patient standing

Look at posture and gait

Look and feel for steps or gaps in vertebrae

Active movements
- —Flexion/extension
- —Lateral flexion both sides
- —Rotation both sides

## Patient supine

Straight leg raise
- —Kernig's sign: with the patient supine, the affected leg is fully bent in flexion at the hip and knee, and subsequent extension in the knee is painful
- —Lasegue's sign: with the patient supine, the straight leg raise test is positive if pain in the sciatic distribution is reproduced between 30° and 70° passive flexion of the straight leg

## Tests of peripheral nerve function lower limbs

Power
- —Walking on toes (mainly S1)
- —Walking on heels (mainly L5)

Squatting—exacerbates back pain

Sensation

Reflexes

## Patient prone

Palpate spine for tenderness including sacroiliac joints

### Patient sitting

Slump test.

### Most likely diagnosis

Lumbar radicular pain.

## Case commentary

Back pain affects up to 80% of the Australian population at some time[1] making examination of the back a commonly required skill in clinical practice. This case should be straightforward as doctors fluently and systematically examine Susan and synthesise the findings. The key issue is to identify the L5/S1 disc space as the site of tenderness and demonstrate full neurological function despite the sciatic nerve symptoms and positive slump test, Kernig's sign or Lasegue's sign.[2, 3]

Susan can be advised to use analgesia, cold or heat packs and plan an early return to work. She should be active but stop any activity that makes her symptoms worse, such as netball. The most common cause of lumbar radicular pain is lumbar disc herniation.[4] No imaging is needed as Susan has no 'red flag' indications (i.e. unrelenting back pain, fever, trauma, history of cancer, loss of bowel or bladder control, age older than 50 years, or acute weight loss and pain not resolving within 4–6 weeks).[5]

# References


1. Briggs, AM & Buchbinder, R 2009, 'Back pain: a national health priority area in Australia?', *Medical Journal of Australia*, vol. 190, no. 9, pp. 499–502.
2. Jensen, S 2004, 'Back pain: clinical assessment', *Australian Family Physician*, vol. 33, no. 6, pp. 393–5.
3. Steven, I & Montanaro, P 2004, 'Sciatica examination', in *Check: program of self-assessment: workplace injury*, Royal Australian College of General Practitioners, Jolimont, Victoria, pp. 6–19.
4. Govind, J 2004, 'Lumbar radicular pain', *Australian Family Physician*, vol. 33, no. 6, pp. 409–12.
5. Markova, T, Dhillon, BS & Martin, SI 2007, 'Clinical inquiries: treatment of acute sciatica', *American Family Physician*, vol. 75, no. 1, pp. 99–100.



# Section 17 Neurology
# Case 52 Wilma Burns

## Instructions for the doctor

This is a short case.

Please take a history, conduct a focused examination, outline the most likely diagnosis and negotiate a management plan with Wilma.

**Scenario**

Mrs Wilma Burns is 54 years old and has been a patient at the practice for several years. She is a keen gardener.

The following information is on her summary sheet:

**Past medical history**
Two children, normal pregnancies and delivery
Vaginal hysterectomy for prolapse aged 45
Mammogram normal this year

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil known

**Social history**
Non-smoker.

# Instructions for the patient Wilma Burns

You are a 54-year-old housewife and a keen gardener. For the last few weeks you have noticed pins and needles in your right hand on waking in the morning. This affects the pulps of the thumb, index, middle and half of the ring finger. Sometimes you get this after you have been gardening and in the last week the tingling sensation has woken you up at night. When you shake your right hand you can make some of the tingling go away and by doing this you can get back to sleep.

If the doctor asks, please say that you do not drink alcohol. You last had immunisations when you were at school.

## Clinical examination findings

You have carpal tunnel syndrome. Please demonstrate an area of paraesthesia in the distribution of the right median nerve. Sensation is normal but power of thumb abduction is reduced. Tinel's sign* and Phalen's sign† are positive.

*Tinel's sign: tapping the flexor retinaculum on proximal part of palm reproduces median nerve paraesthesiae.

†Phalen's sign: flexion of both wrists for 30 seconds reproduces paraesthesiae in median nerve.

Neck and shoulder movements are normal.

The following information is on your medical record:

**Past medical history**
Two children, normal pregnancies and delivery
Vaginal hysterectomy for prolapse aged 45
Mammogram normal this year

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil known

**Social history**
Non-smoker.

## Suggested approach to the case

Establish rapport

Open questions to explore patient's ideas, concerns and expectations.

### Specific questions

Relevant to carpal tunnel syndrome
- —Distribution of paraesthesiae
- —Weakness of thumb movements
- —Symptoms worse at night and early in the morning

Identify possible cause of carpal tunnel syndrome
- —Diabetes, obesity, rheumatoid arthritis, hypothyroidism, employment, hobbies

Exclude other causes
- —Neck or shoulder pathology, OA
- —Malignancy—Pancoast tumour, bone tumour

Request permission to examine.

### Examination

Confirmation of area of paraesthesiae

Decreased sensation over the palm

Wasting of thenar eminence

Reduced power thumb abduction

Tinel's sign

Phalen's sign

Examination of the neck and shoulder.

### Most likely diagnosis

Carpal tunnel syndrome.

### Management

### Investigations

TFTs

Glucose

Consider EMG depending on availability

### Treatment

Splints

Corticosteroid injection

Surgical decompression

### Opportunistic health promotion

Tetanus status—keen gardener

Alcohol intake.

## Case commentary

The history is suggestive of carpal tunnel syndrome. Most doctors suspect the diagnosis very quickly; the focus of the case becomes confirming this suspicion and excluding other causes.

The condition should be explained to Mrs Burns and then which investigations are needed and the treatment options. Some doctors will have easy access to nerve conduction studies but for doctors from rural areas, such investigations will be unavailable, and treatment will commence based on clinical grounds.

Tinel's sign and Phalen's sign are of doubtful value and so a doctor who does not perform these tests will not be penalised. The signs that correlate best with nerve conduction studies are the distribution of paraesthesiae and reduced strength of thumb abduction.[1]

Treatment of carpal tunnel syndrome is controversial as results from studies vary and the condition can resolve spontaneously. A 2008 Cochrane systematic review shows that surgical treatment is probably better than splinting but it is unclear if it is better than steroid injection.[2] A pragmatic approach is to treat any underlying precipitants (such as use of vibration tools, obesity or hypothyroidism), then try night splints and/or local steroid injection prior to referral for surgery.[3]

# References

1. D'Arcy, CA & McGee, S 2000, 'The rational clinical examination. Does this patient have carpal tunnel syndrome?', *Journal of the American Medical Association*, vol. 283, no. 23, pp. 3110–17.
2. Verdugo, R, Salinas, R & Castillo, J et al. 2008, 'Surgical versus non-surgical treatment for carpal tunnel syndrome', in *Cochrane database of systematic reviews*, Wiley, New York.
3. Bland, JDP 2007, 'Carpal tunnel syndrome', *British Medical Journal*, vol. 335, no. 7615, pp. 343–6.

# Case 53 Sybil Clarke

## Instructions for the doctor

This is a long case.

Please take a history, examine this patient appropriately and discuss with her a management plan.

**Scenario**

A 65-year-old lady, Sybil Clarke, has booked a long appointment. She has noticed a tremor and her family have told her that they can no longer read her writing.

The following information is on her summary sheet:

**Past medical history**
Glaucoma, sees ophthalmologist regularly
Vaginal hysterectomy 1983 for prolapse
First child Terry, now aged 42
Second child Malcolm, now aged 39

**Medication**
Timolol 0.25% 1 drop bd

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Retired school secretary
Husband retired credit union manager
Non-smoker
Alcohol intake—40 standard drinks per week recorded in 2005.

# Instructions for the patient Sybil Clarke

You are a 65-year-old retired school secretary. You have always been a very meticulous sort of person. Much to your embarrassment you now have a shake. You have made the appointment because your family said that they could not read your writing on the Christmas card that you sent them.

You have Parkinson's disease.

## Clinical examination findings

Please try to display a resting pill-rolling tremor, an expressionless face, persistent blinking on glabellar tap, cogwheel rigidity, a shuffling gait with a lack of arm swing, micrographia, poor balance and slow, stiff movements.

The following information is on your medical record:

**Past medical history**
Glaucoma, sees ophthalmologist regularly
Vaginal hysterectomy 1983 for prolapse
Frist child Terry, now aged 42
Second child Malcolm, now aged 39

**Medication**
Timolol 0.25% 1 drop bd

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Retired school secretary
Husband retired credit union manager
Non-smoker
Alcohol intake—40 standard drinks per week recorded in 2005.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Sybil's ideas, concerns and expectations.

### Specific questions

Writing—what has changed?

Tremor—when does it occur?

Gait

Bradykinesia—slow movements, e.g. difficulty getting out of a chair, rolling over in bed

Dribbling/excess salivation

Continence or incontinence with delayed access to a toilet

Impact of symptoms on function and wellbeing

General health to exclude other causes—headaches, weight loss, fever, memory, mood

Medication—exclude drug-induced Parkinsonism

Request permission to examine.

### Examination

Pulse

BP

Neurological examination
- —Gait—shuffling
- —Balance—retropulsion test (the patient stands vertically and the doctor pulls them backwards to check for the speed of balance recovery. Parkinson's disease patients are slower to recover.)[1]
- —Tremor—at rest

Peripheral nervous system
- —Coordination—normal
- —Tone—cogwheel rigidity
- —Power—slow movements but normal strength, writing shows micrographia

—Reflexes—normal
—Sensation—normal

Cranial nerve examination
—Normal except for expressionless face and glabellar tap—persistence of blinking reflex typical of Parkinson's disease.

### Most likely diagnosis

Parkinson's disease.

### Management

Explain condition

Demonstrate empathy and observe response to this diagnosis

Information—patient information leaflet.

### Investigations

TFTs

UEC

LFTs.

### Treatment

Drug therapy
—Contraindication for anticholinergic drugs present
—Aim to control symptoms not cure
—Start with a low dose of levodopa
—Dopamine agonist (bromocriptine) and selegiline (selective inhibitor of monoamine oxidase type B) can be added later if needed

Consider referral

Maintain function—healthy diet, regular exercise, consider occupational therapy

Arrange follow-up.

## Case commentary

Given the story of a new tremor plus difficulty writing, Parkinson's disease is the most likely problem. Doctors who think of Parkinson's can ask specific questions to confirm this and then demonstrate the cardinal signs of resting tremor, bradykinesia and rigidity on examination. Doctors who do not suspect Parkinson's disease will need to take a more comprehensive history as well as doing the full neurological examination.

The doctor should consider other common causes of tremor, such as essential tremor, physiological tremor, hyperthyroidism, and potentially serious causes such as cerebellar disorders or a cerebral tumour. A good doctor will be able to demonstrate their clinical reasoning by asking the questions that would suggest these disorders.

Mrs Clarke's history of glaucoma means that anticholinergic medication for the Parkinson's disease is contraindicated.

Telling Mrs Clarke the likely diagnosis needs to be done sensitively. A good doctor may have been able to elicit her concerns at Parkinson's being a possible cause. Such doctors will then be confirming her suspicions rather than breaking the news to her.

The doctor should consider the impact of the diagnosis on Mrs Clarke and provide appropriate support and follow up. Referral to a neurologist or for assistance at home is not needed now but may be in the future.

(The list of 'instructions for the patient' looks daunting, but it can be done. I found that playing Sybil was not only excellent revision for Parkinson's but also gave me new insight into what it might feel like to have the 'shaking palsy'.)

## Reference

1. Samii, A, Nutt, JG & Ransom, B 2004, 'Parkinson's disease', *The Lancet*, pp. 1783–93.

## Further reading

Rao, SS, Hofmann, LA & Shakil, A 2006, 'Parkinson's disease: diagnosis and treatment', *American Family Physician*, vol. 74, no. 12, pp. 2046–54.

Sirisena, D & Williams, DR 2009, 'My hands shake: classification and treatment of tremor', *Australian Family Physician*, vol. 9, pp. 678–83.



# Case 54 Rosie Inkamala

## Instructions for the doctor

This is a long case.

Please take a focused history from Rosie and conduct a physical examination relevant to the presenting complaint. Outline to Rosie your differential diagnosis and negotiate a management plan with her.

**Scenario**

Rosie Inkamala is a 36-year-old Indigenous woman. Rosie has come to see you because two days ago, at the weekend, she could not move her right side for about half an hour. She thought she was having a stroke and was relieved that her movement came back. She has come to see you for a checkup now that the clinic is open.

The following information is on her summary sheet:

**Past medical history**
Rheumatic fever aged 15
Atrial fibrillation (AF)
Alcoholic hepatitis
Hypercholesterolaemia

**Medication**
Atorvastatin 10 mg od
Aspirin 100 mg od
Digoxin 0.625 mg od
Ramipril 10 mg od
Etonogestrel intra-uterine implant six months ago (Mirena)

**Allergies**
Nil known

**Immunisations**
Up to date

**Social history**
High alcohol use
Chews tobacco.

# Instructions for the patient Rosie Inkamala

You are a 36-year-old indigenous woman. Two days ago, at the weekend, you could not move your right arm or leg for about half an hour. You thought that you were having a stroke and were relieved when the movement came back. Today you have decided to come to see the GP for a checkup, now that the clinic is open.

You are feeling much better today and have no symptoms other than tiredness.

You are fluent in four Aboriginal languages but your English is limited.

## Clinical examination findings

BP 124/82 mm Hg

No evidence of cardiac failure

Rate-controlled atrial fibrillation (AF)

No residual neurological findings.

The following information is on your medical record:

**Past medical history**
Rheumatic fever aged 15
Atrial fibrillation(AF)
Alcoholic hepatitis
Hypercholesterolaemia

**Medication**
Atorvastatin 10 mg od
Aspirin 100 mg od
Digoxin 0.625 mg od
Ramipril 10 mg od
Etonogestrel intra-uterine implant six months ago (Mirena)

**Allergies**
Nil known

**Immunisations**
Up to date

**Social history**
High alcohol use
Chews tobacco.

## Suggested approach to the case

Request the assistance of an interpreter

Establish rapport

Open-ended questions to explore Rosie's ideas, concerns and expectations.

### Specific questions

Details about loss of movement—duration, sites of loss of movement

Aura (suggests migraine)

Headache

Any associated loss, such as loss of vision, sensation, consciousness or bladder control

Any residual problem

Previous episodes

Family history of stroke, heart disease

Seek permission to examine

Systems review, e.g. exclude fever, weight change

Request permission to examine.

### Examination

Temperature

Cardiovascular system:
- —Pulse—rate, rhythm, volume
- —BP
- —Splinter haemorrhages
- —Apex beat
- —Heart sounds, added sounds
- —Carotid bruits
- —Evidence of CCF
  - —JVP raised
  - —Pulmonary oedema
  - —Hepatomegaly
  - —Pitting dependent oedema

Neurological system:
- —Gait
- —Balance
- —Peripheral nervous system
  - —Inspection—wasting, tremor, fasciculation
  - —Tone
  - —Sensation—light touch
  - —Power
  - —Reflexes
  - —Coordination
- —Cranial nerve examination

| | |
|---|---|
| I | questions re change sense of smell |
| II | acuity, fields, pupil reflexes, fundi |
| III, IV, VI | eye movements, exclude diplopia and nystagmus |
| V | opening jaw and facial sensation |
| VII | facial movements |
| VIII | hearing, balance |
| IX, X | swallowing |
| XI | shrug shoulders |
| XII | tongue movements. |

## Summary of findings

BP 124/82 mm Hg

No evidence of cardiac failure

Controlled AF

No residual neurological deficit.

## Most likely diagnosis

Transient ischaemic attack (TIA).

## Differential diagnoses

Hemiplegic migraine

Posticteric state

Intracranial bleed.

### Management

Explain likely diagnosis

Educate about link with previous rheumatic fever—need to prevent future stroke and need for control of cardiovascular risk factors

Encourage emergency call if symptoms recur—**TIA** = **T**ake **I**mmediate **A**ction.

### Investigations

FBC

UEC

BSL

Digoxin level

Fasting lipids with ratio

LFTs and coagulation studies (liver damage)

ECG

CT scan asap to exclude haemorrhagic event[1]

Echocardiogram.

### Treatment

Continue current medications

Consider additional anticoagulation post CT scan result—heparin plus warfarin unless patient continues high alcohol consumption or inappropriate for her social circumstances; clopidogrel is an alternative

Culturally-appropriate, motivational interviewing re alcohol and tobacco use

Encourage regular exercise, eating healthy bush tucker

Arrange follow-up.



## Case commentary

The doctor should ask if an interpreter is available. In this scenario one is not, so the doctor will need to communicate with Rosie in simple English. This includes giving the instructions for a neurological examination, which are fairly complex. The doctor should avoid using a loud voice or

assuming that an inability to understand English signifies intellectual disability. These challenges can lead doctors to give up on communication and thus deny patients essential information.

Rosie is at risk of a disabling stroke. A TIA is not a benign event but should be considered a warning for stroke.[2, 3] Sensitivity will be needed when encouraging Rosie to be investigated, adopt a healthier lifestyle and when helping her determine the relative risks and benefits of commencing warfarin.[1]

Rosie should be advised to seek assistance immediately if the paralysis returns. Urgent transfer to a hospital for thrombolytic therapy can then be considered.[4]

## References

1. National Prescribing Service 2009, *Antiplatelet and anticoagulant therapy in stroke prevention.*
2. Solenski, NJ 2004, 'Transient ischemic attacks: Part I. Diagnosis and evaluation', *American Family Physician*, vol. 69, no. 7, pp. 1665–74.
3. Wu, CM, McLaughlin, K & Lorenzetti, DL et al. 2007, 'Early risk of stroke after transient ischemic attack: a systematic review and meta-analysis', *Archives of Internal Medicine*, vol. 167, no. 22, pp. 2417–22.
4. Dhamija, RK & Donnan, GA 2007, 'Time is brain. Acute stroke management', *Australian Family Physician*, vol. 36, no. 11, pp. 892–5.



# Case 55 Yusuf Latif

## Instructions for the doctor

This is a short case.

Please conduct an appropriate physical examination of Yusuf and report your findings to the facilitator.

**Scenario**

Ten days ago Yusuf Latif, aged 15, fell off his bicycle on the way to school after he skidded on some wet leaves. He did not lose consciousness and was wearing a helmet. A bystander called an ambulance and he was taken to the emergency department at the local hospital. The doctor did a thorough examination but the only injuries were cuts and bruises. No imaging was requested.

Yusuf has come in to see you today complaining of headaches for the past three days. They are intermittent, not severe, last between 20 minutes and a few hours, and are relieved by paracetamol. There are no associated features and the headaches can come on at any time. Yusuf is worried that the headaches are caused by the head injury.

The following information is on his summary sheet:

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Lives with his father and younger sister.

# Instructions for the patient Yusuf Latif

Ten days ago you fell off your bicycle on the way to school after skidding on some wet leaves. You did not lose consciousness and were wearing your helmet. A bystander called an ambulance and you were taken to the emergency department at the local hospital. The doctor did a thorough examination but the only injuries were cuts and bruises. You did not have any X-rays or other tests.

For the past three days you have had headaches. They are intermittent, not severe, last between 20 minutes and a few hours, and are relieved by paracetamol. There are no associated features and the headaches can come on at any time.

You are worried that the headaches are because of the injury.

The doctor is expected to conduct an appropriate physical examination and report their findings to the facilitator.

## Clinical examination findings

Normal neurological examination with no signs suggestive of an intracranial bleed.

The following information is on your medical record:

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Lives with his father and younger sister.

## Suggested approach to the case

Establish rapport

Seek permission to examine

Temperature

BP

Pulse

Cognition and orientation

Look for scars on head, swelling, bruising

Feel for any areas of tenderness

Cranial nerve examination:

| | |
|---|---|
| —I | questions re change sense of smell |
| —II | acuity, fields, pupil reflexes, fundi |
| —III, IV, VI | eye movements, exclude diplopia and nystagmus |
| —V | opening jaw and facial sensation |
| —VII | facial movements |
| —VIII | hearing, balance, exclude blood in ear or behind drum |
| —IX, X | swallowing |
| —XI | shrug shoulders |
| —XII | tongue movements |

Neck examination:

- —Look
- —Feel
- —Move

Gait

Balance

Coordination.

## Case commentary

The key issue in this case is to examine Yusuf for focal neurological signs. Yusuf had a minor injury and did not lose consciousness, which makes the risk of serious long-term consequences low.[1] The potential complication of the injury is an intracranial bleed, which could present as headaches. The headaches that Yusuf describes are not typical of raised intracranial pressure but a focused neurological examination is still needed.

# Reference

1. Committee on Quality Improvement, American Academy of Pediatrics & Commission on Clinical Policies and Research, American Academy of Family Physicians 1999, 'The management of minor closed head injury in children', *Pediatrics*, vol. 104, no. 6, pp. 1407–15.

# Further reading

Schutzman, SA & Greenes, DS 2001, 'Pediatric minor head trauma', *Annals of Emergency Medicine*, vol. 37, no. 1, pp. 65–74.

# Case 56 Joe Summers

## Instructions for the doctor

This is a short case.

Please read the following history and conduct a focused clinical examination. Tell the facilitator your findings and what initial investigations you would request.

**Scenario**

Joe Summers is a 67-year-old retired truck driver. He has been a patient at the practice for years but only attends to get his licence renewed. One year he went to a Pit Stop health promotion stand at the local show and he recorded a BMI of 39 kg/m$^2$ and a waist circumference of 115 cm.

Joe has noticed over the last few months that he cannot feel so well with his hands and feet. He assumed this was a normal part of ageing but he mentioned it when he went to buy some shoes and the shop assistant was concerned and told him that he had to come to see a doctor.

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil known

**Family history**
Nil known

**Social history**
Retired truck driver.

# Instructions for the patient Joe Summers

You are a 67-year-old retired truck driver. You have been a patient at the practice for years but only attend to get your licence renewed. One year you went to a Pit Stop health promotion stand at the local show and you recorded a BMI of 39 kg/m$^2$ and a waist circumference of 115 cm. You already knew you were overweight and drank too much so did not see the point of going back to the GP to be told off again.

You have noticed over the last few months that you cannot feel so well with your hands and feet. You also get funny tingling feelings that are irritating. You assumed this was a normal part of ageing but you mentioned it when you went to buy some shoes. The shop assistant was concerned and told you to come to see a doctor for a checkup.

The following information is on your medical record:

**Past medical history**
Nil

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil known

**Family history**
Nil known

**Social history**
Retired truck driver.

Please mimic the absence of sensation to light touch (monofilament), and reduced vibration sense and joint position and pain sense of your feet to the level of your ankle, and hands to your wrist. Motor function, skin, pulses and reflexes are normal.

## Instructions for the facilitator

The following equipment is needed: tendon hammer, sterile neurology pins, tuning fork and 10 g monofilament.

In the interests of time, examination of the hands is not required. When the doctor asks to examine the hands, please say that the signs are the equivalent to the signs in the feet. If the doctor does not examine the hands, do not volunteer this information.

## Suggested approach to the case

Establish rapport

Summarise history

Request permission to examine.

### Examination

Observe patient walking

Skin intact

No muscle wasting or fasciculation

Tone

Sensation
- —Light touch with monofilament
- —Pain sense with neuro-pin
- —Vibration sense
- —Joint position sense

Motor function

Coordination

Reflexes

Pulses

Random BSL or urinalysis.

### Findings

Reduced sensation both feet to ankle level and hands to wrists, i.e. glove and stocking sensory neuropathy.

### Initial investigations

Fasting blood glucose

FBC, ESR, B12, folate

Liver function tests, renal function, TSH

Fasting lipids and ratio

Further assessment
—Drug and alcohol history

Opportunistic health promotion
—Discuss diet and exercise regime.

## Case commentary

Joe has developed a glove and stocking symmetrical sensory peripheral neuropathy. There are multiple potential causes but the most common are diabetes or alcohol.[1] A stepped approach to the investigations is appropriate, starting with the routine blood tests. If these are normal, serum protein electrophoresis for a monoclonal gammopathy, and studies for HIV, sarcoidosis, heavy metal poisoning and vasculitis may be indicated.[2] The underlying cause of the neuropathy needs treatment plus Joe needs advice on preventing damage to his hands and feet.

Foot ulcers are a significant burden for the individuals affected and for the health care system. Prevention is imperative. Testing for peripheral neuropathy is a key component of prevention.[3] Loss of ability to feel a standardised 10 g monofilament correlates with a risk of ulceration, making this test arguably more relevant in clinical practice than the more expensive nerve conduction test. Loss of vibration sense also correlates with the risk of ulceration but less so than the monofilament test.[4]

# References

1. Poncelet, AN 1998, 'An algorithm for the evaluation of peripheral neuropathy', *American Family Physician*, vol. 57, no. 4, pp. 755–64.
2. Pascuzzi, RM 2009, 'Peripheral neuropathy', *Medical Clinics of North America*, vol. 93, no. 2, pp. 317–42.
3. Ogrin, R & Sands, A 2006, 'Foot assessment in patients with diabetes', *Australian Family Physician*, vol. 35, no. 6, pp. 419–21.
4. Singh, N, Armstrong, DG & Lipsky, BA 2005, 'Preventing foot ulcers in patients with diabetes', *Journal of the American Medical Association*, vol. 293, no. 2, pp. 217–28.



# Section 18 Preventive health
# Case 57 Bill Ferguson

## Instructions for the doctor

This is a short case.

Please consult with Bill Ferguson who wants help in giving up smoking.

**Scenario**

Bill Ferguson is a 60-year-old carpenter. He has smoked 30 cigarettes per day since leaving school at the age of 14. Yesterday he had a transient ischaemic attack. The doctor at the Emergency Department in the hospital told him that he had to stop smoking.

Bill has come to see you today to ask for advice on stopping smoking. He has previously resisted any discussion about giving up smoking. He comes to the practice for regular blood pressure and lipid checks.

The following information is on his medical record:

**Past medical history**
Hypertension 5 years
Hypercholesterolaemia 3 years

**Medication**
Perindopril 5mg od
Atorvastatin 80 mg per day
Aspirin 100 mg per day

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Father died stroke aged 64
Mother aged 93, moderate dementia living in nursing home

**Social history**
Smokes 30 cigarettes per day
Alcohol intake—not known.

# Instructions for the patient Bill Ferguson

You are a 60-year-old carpenter. You have smoked 30 cigarettes per day since leaving school at the age of 14. Yesterday you had a funny turn. You suddenly could not use or feel your right arm and right leg. It only lasted about five minutes but it scared you and you went to the hospital. The letter from the hospital said it was a 'transient ischaemic attack' or ministroke. The doctor at the Emergency Department told you that you had to stop smoking or else you would have another attack and would lose your driving licence or have a full stroke.

You have come to your usual GP for advice on stopping smoking. You have previously resisted any discussion about giving up smoking when you come for regular blood pressure and cholesterol checks.

Lighting a cigarette has been the first activity of your day for over 40 years. You have tried to give up smoking before by going 'cold turkey' and only stopped for two weeks. You have never tried nicotine replacement therapy or tablets. Yesterday's funny turn has petrified you and you are now willing to do anything the doctor suggests.

The following information is on your medical record:

**Past medical history**
Hypertension 5 years
Hypercholesterolaemia 3 years

**Medication**
Perindopril 5mg od
Atorvastatin 80 mg per day
Aspirin 100 mg per day

**Allergies**
Nil known

**Immunisations**
Up to date

**Family history**
Father died stroke aged 64
Mother aged 93, moderate dementia living in nursing home

**Social history**
Smokes 30 cigarettes per day
Alcohol intake—not known.

## Suggested approach to the case

Introduction

Establish rapport and confirm reason for consult

Use the **5 A's** approach:

**1. A**sk
How many cigarettes per day, for how long

**2. A**ssess
Readiness to quit

Previous attempts/experience of quitting, longest period of abstinence

Assess nicotine dependence:
—Minutes after waking to first cigarette
—Cravings or withdrawal symptoms in previous quit attempts

Personal preference of using nicotine replacement therapy (NRT) or medication, such as buproprion or varenicline

**3. A**dvise
Specific advice on how to use NRT or medication

**4. A**ssist
Talk through strategies when craves a smoke:
—**4 D's**: **d**elay, **d**eep breathe, **d**rink, **d**istract
—Give information about Quitline

**5. A**rrange
Arrange follow-up

Relapse prevention advice.



### Case commentary

Assisting patients to stop smoking is a core skill for general practitioners with clear evidence of health benefits.[1] The research evidence is that Bill will have more chance of success in quitting if he uses either nicotine replacement therapy or buproprion (Zyban) or varenicline (Champix). He will also benefit from the support of those around him at work and at home and from agencies such as Quitline.

All types of NRT—gum, patch, spray and inhaler—are equally effective and have been shown to increase quit rates at five to 12 months approximately two-fold compared with placebo. The choice of NRT product depends on personal preference. Bill has smoked 30 cigarettes per day for many years and has his first cigarette within 30 minutes of waking up, so has a high likelihood of nicotine dependence. Initially he should use the high dose patch (21 mg/24 hr or 15 mg/16 hr patch) or gum (4 mg), then follow the manufacturer's instructions on switching to the lower dose. At least eight weeks' use is recommended.

Varenicline is a partial agonist at nicotine receptors; it reduces withdrawal symptoms and the pleasurable effects of smoking. Buproprion was originally developed as an anti-depressant. Varenicline appears to be more effective than buproprion.[2]

### Common pitfalls

Bill has previously resisted advice about quitting smoking. The GP must resist any temptation to say 'I told you so' or undermine his current motivation by giving the impression that Bill is unlikely to succeed.

## References

1. Zwar, N 2008, 'Smoking cessation: what works?', *Australian Family Physician*, vol. 37, nos. 1–2, pp. 10–14.
2. Eisenberg, MJ, Filion, KB & Yavin, D et al. 2008, 'Pharmacotherapies for smoking cessation: a meta-analysis of randomized controlled trials', *Canadian Medical Association Journal*, vol. 179, no. 2, pp. 135–44.

## Further reading

Royal Australian College of General Practitioners 2006, *The green book: putting prevention into practice—guidelines for the implementation of prevention in the general practice setting*, 2nd edn, Royal Australian College of General Practitioners, www.racgp.org.au/Content/NavigationMenu/ClinicalResources/RACGPGuidelines/TheGreenBook/RACGPgreenbook2nd.pdf, accessed 29 June 2010.



# Case 58 Taylor Jordan

## Instructions for the doctor

This is a short case.

Please take a history, assess this patient appropriately and discuss a management plan with her.

**Scenario**

Taylor Jordan is a 30-year-old woman not previously seen by you. She has made an appointment to ask you for advice on losing weight.

Three months ago she attended the surgery and was examined and tested to exclude any pathological cause for her obesity.

The following information is on her summary sheet:

**Past medical history**
Irritable bowel syndrome

**Medication**
Combined OCP (ethinyloestradiol, levonorgestrel)

**Allergies**
Nil

**Immunisations**
Recall due for Hep A and for Hep B second injection

**Social history**
Single
Non-smoker
Alcohol intake not recorded.

# Instructions for the patient Taylor Jordan

You are 30 years old. You have always had a problem with your weight. You used to play hockey at state level but no longer exercise regularly. You work at a call centre about an hour's drive from home. Life is a constant series of diets but your height is 1.70 m, your weight is 90 kg and BMI is 30.2 kg/m$^2$. Three months ago you attended the surgery and were examined and tested to exclude any pathological cause for your obesity.

A friend at work lost weight through a very low calorie diet but now she is putting the weight back on. You had thought of trying this diet but are now so uncertain what to do that you have decided to see another GP for advice.

The following information is on your medical record:

**Past medical history**
Irritable bowel syndrome

**Medication**
Combined OCP (ethinyloestradiol, levonorgestrel)

**Allergies**
Nil

**Immunisations**
Recall due for Hep A and Hep B second immunisation

**Social history**
Single
Non-smoker
Alcohol intake not recorded.

## Suggested approach to the case

Establish rapport

Open questions to explore Taylor's ideas, concerns and expectations.

### Specific questions

Review current diet and alcohol intake

Review current exercise

Exclude eating disorder

Brief review of Taylor's previous weight loss strategies.

### Management

Reassure that no need for further tests

Need for diet/activity balance and long-term, sustainable change

Refer to reputable information sources re healthy eating, consider dietician referral
- —Five pieces of vegetable and two pieces of fruit per day
- —Reduce fat intake to less than 30% of calorie intake
- —Advise about use and interpretation of food labels, e.g. low in fat may mean high in sugar

Increase activity—approximately an hour per day per week for weight loss

Set realistic goals—focus on health gains, not weight loss

Plan for regular follow-up and review

Plan for future consultations including hepatitis immunisations and Pap smear.



## Case commentary

This case tests the doctor's ability to engage with Taylor and encourage her with the difficult task of lifestyle change. The formula for losing weight is simple but putting this into practice is not. GPs need to pitch a mix of support and motivating into action carefully.

Taylor's recent physical examination and tests mean that these do not need to be repeated. The doctor should review Taylor's daily routine, her diet and activity. Obesity results from a chronic imbalance between energy

intake from food and energy expenditure. Changes to her diet and energy use (exercise) are needed. The doctor should encourage Taylor to consider realistic changes that fit around her work; for example, is there an option to park the car ten minutes' walk away from work, can she exercise during her lunch breaks, what exercise can she do at weekends?

The increase in food labelling should assist patients to work out what they are eating but it is worth reading the fine print. I now store an old 'low fat' yoghurt pot in my clinic room to show how the percentage of daily intake is shown as 9%, but this is per serve: the pot actually contains two serves!

Other useful snippets are that to burn off the calories in one banana (365 kJ) the average person would need to cycle for 11 minutes; to burn off the calories in one beer (585 kJ), walk for 33 minutes—and one jam doughnut (1360 kJ) is equivalent to 55 minutes of dancing.

## Further reading

Biel, L 1999, 'What is proper weight? Shake it up, or go figure', *Dallas Morning News*, 30 August, p. 1F.

Egger, G 2008, 'Helping patients lose weight: what works?', *Australian Family Physician*, vol. 37, nos. 1–2, pp. 20–23.

National Health and Medical Research Council 2003, *Clinical practice guidelines for the management of overweight and obesity in adults*, Department of Health and Ageing, Canberra, www.health.gov.au/internet/main/publishing.nsf/Content/obesityguidelines-guidelines-adults.htm, pp. 137–56, accessed 29 June 2010.

# Case 59 Ali Turnbull

## Instructions for the doctor

This is a short case.

Please take a history and negotiate a plan for management.

**Scenario**

Ali Turnbull is a 32-year-old artist who comes to see you requesting sleeping tablets. This is the first time that she has been to this surgery.

Prior to seeing you she completed the new patient questionnaire as below:

**Past medical history**
Recurrent tonsillitis

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Can't remember, will ask Mum

**Family history**
Mum and Dad both fine, live interstate

**Social history**
Artist
Single
Smokes 15 cigarettes per day.

# Instructions for the patient Ali Turnbull

You are a 32-year-old artist who has come to the GP to request sleeping tablets. You used to combine your artwork with work as a Community Development Officer at the downtown youth centre. This year you sold enough paintings to be able to afford to paint full-time. You love the freedom and chance to express yourself and are happy to be earning enough money doing what you love to do.

Your timetable is flexible enough to fit around your inspiration to paint and you often end up painting all night if you are working well. You fit shopping and washing in when you have run out of food or clean clothes. You drink about eight cups of coffee per day and do no regular exercise. You drink 2–3 beers a day; your ideal evening is painting until late and then catching up with friends on internet social networking sites from the comfort of your bed.

Your mood is stable and you have no weight loss or other symptoms suggestive of an organic illness.

The only frustration is that you cannot sleep and you have decided to see if the local GP can help. This is your first visit to this practice as you previously saw the GP near the youth centre.

Before seeing the GP you completed the new patient questionnaire as below:

**Past medical history**
Recurrent tonsillitis

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Can't remember, will ask Mum

**Family history**
Mum and Dad both fine, live interstate

**Social history**
Artist
Single
Smoke 15 cigarettes per day.

## Suggested approach to the case

Establish rapport

Open-ended questions to establish Ali's ideas, concerns and expectations.

### Specific questions

Sleep pattern and quality, bedtime regime

Lifestyle
- —Work
- —Family or community commitments
- —Alcohol
- —Smoking
- —Exercise

General health
- —Brief systems review to exclude organic illness

Mental health
- —Mood, energy levels—exclude mania or depression

Strategies and treatments tried so far.

### Diagnosis

Insomnia secondary to lifestyle.

### Management

Explain problem—need for significant lifestyle change to improve sleep quality in short-term and long-term health

No indication for medication

Regular routine—consistent daytime rising important

Develop regular night-time routine—keep bed for sleep, not the internet

Cut down caffeine

Stop smoking

Cut down alcohol consumption

Regular exercise (at least two hours ahead of bedtime)

If can't sleep, get up and try again.



## Case commentary

Ali's success in her painting career has meant freedom from the restrictions imposed by paid external employment. Her love of her work means that it seems effortless to her to stay up for much of the night painting. However, this freedom comes at a price of poor sleep and a lifestyle that has the potential for harm in the long term. Ali needs specific advice on how to restore her circadian rhythms to promote good quality sleep and a non-judgmental space to discuss the implications of her smoking, alcohol consumption and lack of exercise.

The last thing that Ali needs is medication so that she can mask the problem of not sleeping and continue to push her body beyond the design specification!



## Common pitfalls

Poor sleep can be a sign of mental illness such as mania or depression, or might herald a new onset of an organic illness such as diabetes mellitus causing nocturia. Whilst Ali's story seems immediately related to her lifestyle, it is vital to avoid 'premature closure' of the diagnosis and exclude the symptoms indicative of more sinister causes.

# Further reading

American Academy of Family Physicians 2009, 'Information from your family doctor. Help with chronic insomnia', *American Family Physician*, vol. 79, no. 2, pp. 131–2.

Berk, M 2009, 'Sleep and depression: theory and practice', *Australian Family Physician*, vol. 38, no. 5, pp. 302–4.

Harsora, P & Kessman, J et al. 2009, 'Nonpharmacologic management of chronic insomnia', *American Family Physician*, vol. 79, no. 2, pp. 125–30.

# Section 19 Professional practice
# Case 60 Vincent Butler

## Instructions for the doctor

This is an eight-minute viva station. Please discuss your management of this situation with a GP colleague.

**Scenario**

You are on call and it is the end of the Saturday morning surgery. Your receptionist gives you a message from the laboratory to say that Mr Vincent Butler's INR level is 5.7.

You find the following information in Mr Butler's medical record:

**Age**
62

**Past medical history**
Mitral valve replacement six years ago
Hypertension

**Medication**
Warfarin 6 mg, alt day 7 mg
Ramipril 10 mg per day
Atorvastatin 20 mg per day

**Allergies**
Nil recorded

**Immunisations**
Nil recorded

**Social history**
Retired chef.

## Instructions for the facilitator

This is a viva station.

The doctor is expected to talk with you as a professional colleague. During the viva please ensure you ask the following questions:

- What is your management of Mr Butler today?
- What are the common causes of poor INR control?
- What systems should there be in a practice to monitor the INR of patients on warfarin?
- You decide to do a locum in a remote Aboriginal community. Would that make any difference to your management of patients on warfarin?

### Scenario

The doctor is on call and it is the end of Saturday morning surgery. The doctor has received a message from the receptionist to say that Mr Vincent Butler's INR level is 5.7.

The following information in Mr Butler's medical record:

**Age**
62

**Past medical history**
Mitral valve replacement six years ago
Hypertension

**Medication**
Warfarin 6 mg, alt day 7 mg
Ramipril 10 mg per day
Atorvastatin 20 mg per day

**Allergies**
Nil recorded

**Immunisations**
Nil recorded

**Social history**
Retired chef.

# Suggested approach to the case

1. **Management of the high result**

   Clarify result with laboratory—preferably in writing/fax

   Check that it is the correct result for the correct patient on the correct date

   Search notes for:

   - Contact details. Inform patient by phone if possible or via text message or via friend/family. If via message must ensure that Mr Butler phones you back to confirm receipt of the message and management plan. If not contactable may need to do home visit.
   - Clinical information: reason for being on warfarin, target INR, any recent medication change likely to alter INR, pattern of INR control.

   ***Management plan—to discuss with Mr Butler***

   - Plan for temporary cessation of warfarin, next test date and how to get results to find out next dose of warfarin
   - Reiterate indications that would require hospital assessment: prolonged bleeding from a cut or unexpected bleeding
   - Recommend quiet weekend, avoid contact sports
   - Question to determine what affected control.

2. **Common causes of poor INR control**
   - Poorly calibrated machine/incorrect use of machine on point-of-care testing
   - Omissions or commissions taking warfarin, either deliberate or accidental
   - Medication interaction: patients should inform any prescriber that they are on warfarin, as NSAIDs and antibiotics (ciprofloxacin, metronidazole, doxycyline, erythromycin) are common causes of raised INR
   - Herbal products known to interact with warfarin include gingko, ginger, ginseng, garlic, St John's wort
   - Change to a different formulation—the formulations of warfarin are not interchangeable
   - Dietary change: increase in consumption of foods high in Vitamin K, such as green vegetables, can reduce INR; conversely a decrease in consumption can increase INR
   - Alcohol consumption.

3. **What systems should there be in a practice to monitor the INR of patients on warfarin?**

   Practices need systems that are not dependent on one person; they should be 'locum-proof' and 'holiday-proof'.

   The systems can be electronic or paper-based and should include the following:

   - A list of all patients on warfarin
   - For each patient on warfarin, their notes should say the indication, planned duration of treatment and target INR
   - Each patient should be advised about the need for regular monitoring, to alert any prescriber that they are on warfarin, to maintain a stable diet, and of symptoms that would require urgent attention
   - Method of checking that each person being prescribed warfarin has regular INRs. The minimum recommended interval is monthly. Tests can be done at a laboratory or on-site using point-of-care testing equipment.
   - A result is received for each INR requested
   - Each INR result is checked on the day that the sample was taken
   - Patients get or receive their INR results on the day that the sample was taken. Each result to include the INR result, the current and recommended new dose and date of next test.
   - Each result is signed, dated and filed
   - System should include protocol for weekend and on-call handling of results.

4. **You decide to do a locum in a remote Aboriginal community. Would that make any difference to your management of patients on warfarin?**

   Management may need to take into consideration the following:

   - Use of point-of-care testing rather than lab for INR, need for regular calibration
   - If lab is used, potential delay in getting specimen to lab and getting results
   - Limited ability to contact patients by telephone. May need to liaise with clinic staff about how results are normally passed to patients, e.g. clinic bus or via Aboriginal liaison officer.
   - Limited use of English. May need to use interpreters or in clinic use warfarin tablets to demonstrate how many of each colour to take.
   - Intermittent access to food including fruit and vegetables
   - Lack of secure facilities to store warfarin
   - Patient may choose a nomadic lifestyle—need to assess risk/benefits of warfarin in this situation

- Potential high use of alcohol—particularly in binges. What is the patient's individual risk/benefit equation?
- Cultural factors—warfarin may need to be ceased ahead of some ceremonies/pay-back.

## Case commentary

This case requires the GP to talk with a professional colleague about a common clinical situation. The doctor will be assessed on their ability to listen and then talk concisely, clearly and with a response appropriate to the question. Medical jargon can be used providing it is clear that both doctors use the same jargon or abbreviations to mean the same thing.

Warfarin is increasingly indicated for primary and secondary prevention of cardiovascular disease following evidence from randomised controlled trials of its benefits. While there is evidence of benefit at the population level for those at high risk, it is up to the GP to assess the risks and benefits for an individual patient, taking into consideration that patient's psychological, social, cultural and biomedical factors and the clinic's ability to monitor the drug safely. Patients should make informed decisions about the relative merit of warfarin versus other anticoagulants such as aspirin.[1]

## Common pitfalls

Medico-legal advice is that the prescription of warfarin requires patients 'who are well instructed, able to communicate clearly, cognitively intact, cooperative and compliant'.[2]

The duty of care that GPs have for following-up and taking action on results depends 'on the probability that the patient will be harmed if adequate follow up does not occur, the likely seriousness of the harm and the burden of taking steps to reduce the harm'.[3] Warfarin and INR problems accounted for the largest proportion (18%) of medication errors in the *Threats to Australian Patient Safety* (TAPS) study.[4]

# References

1. National Prescribing Service 2009, 'Antiplatelet and anticoagulant therapy in stroke prevention', *Prescribing Practice Review for Primary Care*, no. 44.
2. Bird, S 2003, 'Medication errors: warfarin', *Australian Family Physician*, vol. 32, no. 12, pp. 1003–4.

3. Royal Australian College of General Practitioners 2005, 'System for follow up of tests and results', in *Standards for General Practice*, 3rd edn, Royal Australian College of General Practitioners, p. 29.
4. Makeham, MAB, Saltman, DC & Kidd, MR 2008, 'Lessons from the TAPS study. Warfarin: a major cause of threats to patient safety', *Australian Family Physician*, vol. 37, no. 10, pp. 817–18.

## Further reading

Gallus, AS, Baker, RI & Chong, BH et al. 2000, 'Consensus guidelines for warfarin therapy. Recommendations from the Australasian Society of Thrombosis and Haemostasis', *Medical Journal of Australia*, vol. 172, pp. 600–5.



# Case 61 Stephanie Clark

## Instructions for the doctor

This is a short case.

You have arranged a meeting with your receptionist Stephanie Clark to manage the following situation.

**Scenario**

Stephanie Clark works as a receptionist at your single-handed practice. Her three-year-old child, Letitia, attends the local child care centre. Last week another child, Daisy, attended the practice because of diarrhoea. Daisy's Mum, Sally, was advised to keep Daisy at home until the results of the stool tests were available.

Sally brings Daisy to the practice today for follow-up. Sally mentioned that she already knew that the stool test showed an infection that needed treatment as Stephanie had told her when they met in the supermarket yesterday.

Breach of patient confidentiality is a reason for instant dismissal in all your staff contracts. Your practice manager is currently on leave and so you have to meet with Sally on your own.

# Instructions for the receptionist Stephanie Clark

You work as a receptionist at the local general practice. Your three-year-old daughter, Letitia, attends the local child care centre.

Children at the child care centre have had a 'run' of diarrhoea. You have been hoping that Letitia would not catch the infection as you would have to take time off work to care for her.

Letitia's best friend is Daisy. Last week Daisy attended the practice because of diarrhoea. Daisy's Mum, Sally, was advised to keep Daisy at home until the results of the stool tests were available. When you chatted with Sally at the supermarket yesterday you told her the result showed Daisy needed treatment. Sally was happy to know this as then she could reschedule her work.

You are a bit surprised that the GP has asked to see you this morning.

When the GP tells you about the breach of confidentiality rules and implications for your job, you react defensively. You consider that the rules are 'over the top' and stupid—Sally is your friend and you have a right to tell her what you know.

You show no insight into the seriousness of your error.

## Suggested approach to the case

Sit down in quiet private office

Explain reason for meeting—Sally knew the results of Daisy's stool test prior to seeing the doctor

Sensitively ask for Stephanie's side of the story

Demonstrate active listening to Stephanie

Test out Stephanie's understanding and response to a reminder of the rules of patient confidentiality

Remind Stephanie that her employment can be terminated immediately if breach of confidentiality occurs

State that Stephanie has breached confidentiality, based on her information today and information from Sally in consultation

Tell Stephanie that her employment is being ceased and that she will be paid outstanding leave entitlements. Ask her to leave the practice and remind her that duty of confidentiality continues after leaving the job

Document in Stephanie's personnel folder the meeting and its outcome.



## Case commentary

This case tests the doctor's knowledge of the legal and organisational domain of general practice and their skill in applying this knowledge in a difficult situation. All GPs need this core competence even if after qualification many delegate tasks to practice managers or choose to be an employee in a corporate entity.

Maintaining patient confidentiality is vital for all general practitioners and their staff.[1, 2] It is a particular issue for rural and remote practices where everybody knows everybody, but this does not mean that everybody has a right to know everybody's business.

Stephanie has committed a sackable offence that threatens the reputation and perhaps viability of the practice. The GP is lucky that in this instance that the patient has not put in a formal complaint. Stephanie's response shows that she has no insight into the seriousness of her misconduct. Continuing her employment risks further breaches and so the GP takes the necessary step of terminating her employment immediately.

# References

1. Bird, S 2005, 'A GP's duty of confidentiality', *Australian Family Physician*, vol. 34, no. 10, p. 881.
2. Royal Australian College of General Practitioners National Expert Committee on Standards for General Practices 2005, 'Management of health information', in *Standards for General Practice*, 3rd edn, Royal Australian College of General Practitioners, Melbourne, pp. 57–8.



# Case 62 Patient complaint

## Instructions for the doctor

This is a short case.

You are expected to discuss a clinical problem with the facilitator role playing a senior colleague.

**Scenario**

Last Friday evening you did your first evening on call for the practice. It was much busier than you had expected. As it was your wedding anniversary and you had forgotten to tell your spouse you were on call, you were keen to get home as soon as possible.

You are a bit puzzled as to why the practice principal has asked to chat with you after this morning's surgery about a problem. Your memory is that you saw mostly kids with runny noses and one with an ear infection.

# Instructions for the practice principal

Last weekend you were on call when you received a phone call from an angry and anxious mother, Debra Poole. Her son Declan, aged four, had a painful ear and they had come to see the new doctor at the practice. Debra says that the doctor seemed to be in a hurry and had a quick look in the ears, did no further examination and then reached into the cupboard for a starter pack of amoxycillin. The doctor hand wrote a script for amoxycillin to be started the next day.

Debra gave Declan the first dose of the medication but then looked more carefully at the packet and saw the drug was similar to penicillin. Two years previously Declan had had an allergic reaction to penicillin requiring him to stay overnight in hospital. Once she realised what had happened she went straight to the emergency department. As a precaution he was admitted to hospital for observation. Fortunately Declan did not react to the single dose of amoxycillin but Debra lost a day's pay because she could not work the following day.

When you met with Debra at the weekend you promised that you would discuss this with your colleague on Monday.

## Suggested approach to the case

Doctor to listen carefully to the practice principal's concerns

Doctor demonstrates understanding of different issues involved
- —Problem of too brief clinical examination and risk of missing other more serious pathology
- —Impact of 'being in a hurry' on the consultation
- —Inappropriate prescribing of amoxycillin despite allergy
- —Financial impact on family of mistake
- —Impact on practice reputation/business

Doctor acknowledges mistakes and outlines plans for action
- —Apologise to the family for the mistake
- —Apologise to the practice principal for impact on practice/ reputation
- —Will conduct more appropriate full physical examination in future
- —Will check with patient about allergies and use information in the records
- —Will use computer-based prescribing system which records allergies
- —May seek assistance with consultation techniques so as not to appear in a hurry, such as asking senior doctor to sit in or observe videotaped consultations
- —Ask practice principal if there is anything else that should be done
- —Inform medical defence organisation.



## Case commentary

This case tests a doctor's ability to talk with a colleague, to recognise a mistake and to learn from it. The doctor is fortunate that in this instance no severe reaction occurred. A prompt apology to the patient's family and the practice principal is needed.[1] This should be followed up by reflection on the precipitants of the problem. In this case it was the tension between a work and a home commitment, a common scenario for GPs. This does not mean that GPs should not have a home life but that in most instances it takes second place when on call. A useful acronym is 'HALT', meaning that a GP should take extra care when hungry, angry, late or tired.

The doctor should outline to the practice principal what they intend to do differently in the future to prevent a recurrence of a similar event. Such critical incidents can be a useful learning tool for the doctor and the practice.[2]



## Common pitfalls

The doctor in this scenario must avoid defending their actions and blaming the mother for not mentioning the penicillin allergy. Taking an allergy history is good practice whenever a medication is being prescribed. Absence of a documented allergy is not evidence of absence of an allergy. Such errors in the process of care are more common than errors due to lack of knowledge or skills.[3]

# References

1. Bismark, MM 2009, 'The power of apology', *New Zealand Medical Journal*, vol. 122, no. 1304, pp. 96–106.
2. Vincent, C, Taylor-Adams, S & Chapman, EJ et al. 2000, 'How to investigate and analyse critical incidents: clinical risk unit and association of litigation and risk management protocol', *British Medical Journal*, vol. 320, pp. 777–81.
3. Makeham, MA, Stromes, S & Bridges-Webb, C et al. 2008, 'Patient safety events reported in general practice: a taxonomy', *Quality and Safety in Health Care*, vol. 17, no. 1, pp. 53–7.



# Case 63 Quality

## Instructions for the doctor

This is a short case.

**Scenario**

You have applied for a partnership in a general practice.

The practice has three associates and is an expanding suburban area. The practice bulk-bills pensioners and health care card holders. Last year the practice converted to using computerised medical records but the practice is not accredited.

The principal of the practice would like a new partner to increase the quality of care offered in the practice. The principal will expect you to define quality and to suggest changes in the practice that would improve quality and how you would implement these changes.

You are very keen to get this position as it is close to your spouse's place of employment.

# Instructions for the practice principal

You are nearing retirement and have been the principal in the practice for the last 30 years. You are interviewing for a new partner in the practice.

The practice has three associates and is located in an expanding suburban area. The practice bulk-bills pensioners and health care card holders. Last year the practice converted to using computerised medical records but the practice is not accredited.

You want the new partner to introduce quality measures to the practice. You want a partner who has a clear idea of what quality is and can make practical suggestions for how this can be achieved in the practice.

During the interview you will ask the following questions:

1. What does quality general practice mean to you?
2. How would you measure quality in general practice?
3. What methods of quality improvement in general practice do you know about?
4. How would you introduce the quality agenda in this practice?

## Suggested approach to the case

**What does quality general practice mean to you?**

To me general practice is

—Providing care for patients and their families across their lifespan from the cradle to the grave
—First point of contact care
—Community-based
—Continuing
—Comprehensive
—Preventive
—Practised within a primary health care team.

To me, quality care is offering the best care I can in partnership with patients, within the resources available, using the evidence available and working together with the rest of the primary health care team.

The WONCA definition of quality is 'the best outcomes possible given available resources and the preferences and values of patients'.[1]

**How would you measure quality in general practice?**

***Option 1. Assess quality against the domains of general practice***

(a) Doctor–patient relationship
—Patient satisfaction survey
—Peer review of consultation videos
—Sitting-in on consultations

(b) Applied professional knowledge and skills
—Audit of clinical care—is evidence-based current practice applied?

(c) Population health and the context of general practice
—Immunisation rates in the practice
—Pap smear rates
—Provision of services appropriate to local population, including Aboriginal and Torres Strait Islander patients, with regards to culture and language

(d) Ethical and professional role
—Postgraduate courses, involvement in research and training
—Absence of complaints

(e) Legal and organisational role
—Assessment of medical records
—Availability of and waiting times for appointments
—Accreditation
—Absence of medico-legal cases.

*Option 2. Assess quality using Donabedian's framework*

(a) Structure of care
- —Consulting rooms assessed against national standard
- —Treatment rooms assessed
- —Facilities and equipment

(b) Process of care
- —Clinical consultations assessed by direct or video observation

(c) Outcomes of care
- —Morbidity and mortality data of the patients
- —Job satisfaction, financial reward and sustainability for the staff.

**What methods of quality improvement in general practice do you know about?**

Continuing professional development (CPD) is a means of quality improvement for practitioners. CPD is more effective if it is linked to practice audit and the whole team participates in the education.

The process of applying for accreditation requires us to both measure quality and to improve it.

An Australian Government quality improvement initiative is the National Primary Care Collaboratives program. I would be keen for the practice to participate in this scheme.

**How would you introduce the quality agenda in this practice?**

My initial thoughts are that the practice should work towards accreditation and towards using the information on what we do from the computerised medical records, through clinical audit. However, to implement change within a practice, I would first need to become an accepted member of the team and only then get the team to work together on changes.

I would work with individuals and the group to form a consensus on definitions of quality and ask each individual for ideas on how to improve the quality. The RACGP has a quality framework for Australian general practice* that we could use as a resource. I would need to involve the practice associates in this as this change may produce more work for them but create financial benefits for the practice rather themselves individually. Input from a patient participation group would tell us about aspects of the practice that they consider could be improved.

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*The RACGP Quality Framework: professionalism, competence, patient focus, capacity, knowledge, information management and financing. Using this framework would be an excellent way to answer this question but I would not expect a candidate to be able to remember this list in an exam setting. However, the domains of general practice should be familiar to all exam candidates.

## Case commentary

Most of the focus of general practice and general practice exams is on the care of individual patients. This question challenges doctors to think about their future role as independent practitioners who are responsible for providing quality care.

Quality care requires much more than competent, quality practitioners. It requires staff, premises, facilities, systems and appropriate communication with other health professionals. This does not happen automatically.

This question tests the doctor's ability to 'think on their feet' and articulate concepts that are more often implicit than explicit. No one aims to offer poor quality care but defining and measuring quality is surprisingly difficult.

The best approach to a question like this is to speak personally and create a framework for your ideas. The first question is what does quality mean to you, not what the dictionary or RACGP definition of quality is. The example written is my personal definition but I've added the WONCA definition for comparison.

A framework for your ideas will enable you to say what you know in a logical manner. Examples of suitable frameworks include:

1. Donabedian's 'the structure of care, the process of care and the outcomes of care'[2]
2. The different levels of the health system—'the patient, the practice, the region, the national health system'
3. The domains of general practice.

# References

1. Wonca Quality Assurance Working Party, www.globalfamilydoctor.com/aboutWonca/working_groups/quality_ass/wonca_qualass.htm, accessed 29 June 2010.
2. Donabedian, A 1980, *The definition of quality and approaches to its assessment*, Health Administration Press, Ann Arbor, Michigan.

# Further reading

Booth, BJ & Snowdon, T 2007, 'A quality framework for Australian general practice', *Australian Family Physician*, vol. 36, nos. 1–2, pp. 8–11.



# Section 20 Respiratory medicine
# Case 64 Andrew Bond

## Instructions for the doctor

This is a long case.

Please take a history and conduct an appropriate clinical examination. Outline to Andrew your diagnosis and plans for initial management.

**Scenario**

Mr Andrew Bond is a 65-year-old gentleman who has not been to the surgery for a while. He is usually well. You spent time with him a year ago when he was giving up smoking. You are not sure why he has booked this appointment with you today.

The following information is on his summary sheet:

**Past medical history**
Vasectomy aged 42

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Retired bus driver
Gave up cigarette smoking last year—was 20 per day for 40 years.

# Instructions for the patient Andrew Bond

You are a 65-year-old retired bus driver who gave up cigarette smoking last year. The final spur to giving up was when your older brother was diagnosed with lung cancer. Like you, he had smoked since leaving school. You had a bit of a cough for the weeks after you gave up but then you were fine and felt better than you had for years.

You have developed a new cough in the last three to four weeks. It is worst first thing in the morning. You have coughed up some blood but mostly it is a dry cough. You have lost weight and your appetite is not so good. You get puffed more easily than you used to but you are still managing to do the wood-turning you enjoy.

At the back of your mind is the thought that this might be cancer. You are not going to tell the GP that this is your concern but will talk about it if the GP mentions it.

## Clinical examination findings

Height 1.7 m

Weight 67 kg (weight five years ago 73 kg)

BMI 22.1 kg/m$^2$

No abnormal clinical findings.

The following information is on your medical record:

**Past medical history**
Vasectomy aged 42

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Social history**
Retired bus driver
Gave up cigarette smoking last year—was 20 per day for 40 years.

## Suggested approach to the case

Establish rapport

Open-ended questions to establish Andrew's ideas, concerns and expectations.

### Specific questions

Cough

Haemoptysis

Sputum

Pain

Shortness of breath

Fever

Family history

Social history
—Confirm smoking history
—Occupational history—exposure to asbestos
—Travel

Systems review—to include weight loss/appetite/energy/sleep

Request permission to examine.

### Examination

General signs
—Weight loss
—Cyanosis
—Clubbing

Respiratory system
—Respiratory rate
—Use of accessory muscles
—Trachea
—Chest expansion
—Percussion
—Auscultation
—Lymph node enlargement

Abdominal examination looking for evidence of metastatic spread to the liver.

### Differential diagnosis

Carcinoma of the bronchus—doctor must mention this as a possibility

Infection—bronchitis or pneumonia

Chronic obstructive pulmonary disease

Tuberculosis.

### Initial investigations

FBC

ESR or CRP

UEC

LFTs

Chest X-ray

Consider spirometry

Sputum for cytology and MCS.

### Management

Dependent on results, referral for a bronchoscopy and/or high resolution CT

Assure Mr Bond of ongoing support

Non-urgently need to find out about alcohol consumption and check of immunisation status

No proven benefit for cough medicine

Arrange follow-up.



## Case commentary

Mr Bond's story of long-term past smoking, loss of weight and appetite and a new cough and haemoptysis indicates carcinoma of the bronchus until proved otherwise. High-resolution CT or referral for bronchoscopy are indicated even if the initial investigations are negative.[1, 2]

It is essential that the doctor includes carcinoma of the bronchus in the differential diagnosis. This can be made clear either by including it in the discussion with Mr Bond or by a direct comment to the facilitator.

In clinical practice the timing of when to share the potential diagnosis of cancer is determined by many factors. These include the GP's prior relationship to the patient and the patient's level of interest in finding out the diagnosis. Patients have the right to information and evidence suggests that patients are keen to find out more than doctors are willing to tell them. True patient-centred medicine gives the right level of information, in understandable terms, at the right pace and at the right time, as determined by the patient.

Poor doctors will either tell Mr Bond a definite diagnosis of cancer with blunt disregard for his feelings or be too embarrassed or anxious to mention the word cancer. Try to avoid these extremes. A good doctor will seek Mr Bond's pre-existing concerns and sensitively talk about the differential diagnosis in the light of this and the clinical situation. Empathy with Mr Bond's reactions will also be demonstrated.

## References

1. Bidwell, JL & Pachner, RW 2005, 'Hemoptysis: diagnosis and management', *American Family Physician*, vol. 72, no. 7, pp. 1253–60.
2. Mitchell, G & Mitchell, C 2004, 'Lung cancer', *Australian Family Physician*, vol. 33, no. 5, pp. 321–5.



# Case 65 Kerrie Griffiths

## Instructions for the doctor

This is a short case.

Please take a history from Kerrie and conduct an appropriate focused clinical examination. Outline your differential diagnosis to the facilitator.

**Scenario**

Kerrie Griffiths is a 32-year-old woman whose first child was born by caesarean section a week ago. Baby Eloise is doing fine and Kerrie was discharged home yesterday.

This morning Kerrie has noticed a sharp pain on the left side of the chest. The pain is worse on breathing in. You are called to see Kerrie at home.

**Past medical history**
Asthma

**Medication**
Fluticasone 250 mcg 1 puff bd
Salbutamol inhaler prn

**Allergies**
Nil

**Immunisations**
Up to date, rubella booster pre-pregnancy

**Family history**
Nil significant

**Social history**
Non-smoker.

# Instructions for the patient Kerrie Griffiths

You are 32 years old and your first child was born by caesarean section a week ago. Baby Eloise is doing fine and you were discharged home yesterday. This morning you have noticed a sharp pain on the left side of your chest. This is worse on breathing in and you feel short of breath. You have asked the doctor to see you at home.

This is a new pain. It is preventing you from breathing comfortably. You have had a cough this morning, and have coughed up a bit of blood. You do not have a temperature and do not have any pain or symptoms suggestive of a deep vein thrombosis in your legs. You are breastfeeding without difficulty.

The following information is on your medical record:

**Past medical history**
Asthma

**Medication**
Fluticasone 250 mcg 1 puff bd
Salbutamol inhaler prn

**Allergies**
Nil

**Immunisations**
Up to date, rubella booster pre-pregnancy

**Family history**
Nil significant

**Social history**
Non-smoker.

## Clinical examination findings

When the doctor examines you, please tell them the following:
—Temperature 37.2°C
—Pulse 106 regular
—BP 112/78 mm Hg
—Respiratory rate 20 per minute.

You will experience pain in your left lower lobe on inspiration and be reluctant to take deep breaths

The chest is clear

Legs are normal (the most likely diagnosis is that you have a pulmonary embolus).

## Suggested approach to the case

Establish rapport

Ask after the baby, feeding, sleep etc

Open questions to explore Kerrie's ideas, concerns and expectations.

### Specific questions

Details about the pain

Check for haemoptysis, dizziness, syncope, shortness of breath

Enquire about asthma control

Exclude infection as likely cause—ask about fever, systemic upset

Any leg pain

Any previous clotting problems, known thrombophilia

Exclude mastitis/feeding problem

Reason for caesarean section—epidural or general anaesthetic?

Social history—does she smoke?

Family history of clotting problems

Request permission to examine.

### Examination

Temperature

Pulse

BP

Respiratory rate

Chest
- —Use of accessory muscles
- —Palpation—chest expansion
- —Percussion
- —Auscultation

Heart sounds

Legs—for signs of a DVT.

### Differential diagnosis

Must mention pulmonary embolus

Basal atelectasis

Pneumonia

Other options pulled muscle—less likely.

Note: In clinical practice this consultation would include a check of the breasts, abdomen and scar, and other features of postnatal care.



## Case commentary

This case provides doctors an opportunity to practice, time and demonstrate their skills in taking a history and conducting an examination of both the cardiovascular and respiratory systems. The doctor must sensitively ask the patient to remove their clothes, including the bra, as mastitis is one of the potential diagnoses. A chaperone should be offered. The facilitator will explain that examination of the breasts is normal and that this is not required in this case.

The combination of new pleuritic chest pain, shortness of breath, a cough, haemoptysis and recent delivery requires the doctor to consider pulmonary embolus as a potential cause.[1] Pulmonary embolus is more common (relative risk over 4) during pregnancy and is 15 times more common in the postpartum period.[2]

This case does not ask the doctor for management, but is it worth noting that pulmonary embolism cannot be excluded from just a history and examination. Kerrie would require hospital admission for further tests. Her high risk of pulmonary embolism means that a negative D-Dimer test would NOT rule out this diagnosis.[3]

# References

1. Chapman, NH, Brighton, T & Harris, MF et al. 2009, 'Venous thromboembolism: management in general practice', *Australian Family Physician*, vol. 38, nos. 1–2, pp. 36–40.
2. Tapson, VF 2008, 'Acute pulmonary embolism', *New England Journal of Medicine*, vol. 358, no. 10, pp. 1037–52.
3. Konstantinides, S 2008, 'Clinical practice. Acute pulmonary embolism', *New England Journal of Medicine*, vol. 359, no. 26, pp. 2804–13.



# Case 66 Paul Jackson

## Instructions for the doctor

This is a short case.

Please read the following history. The results of the examination will be available from the facilitator. Using this history and the examination findings, outline your diagnosis and management plans to Paul.

**Scenario**

Paul Jackson is a 20-year-old man who is about to start a painting and decorating apprenticeship. Paul had asthma as a child but has been well since. Four weeks ago he had a viral upper respiratory tract infection. Since then he has had a cough, which is keeping him awake at night. He is short of breath and has to stop playing soccer after only 10 minutes. He gets some wheeze after exercise.

The following information is on his summary sheet:

**Past medical history**
Childhood asthma

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Maternal osteoporosis

**Social history**
Lives with de facto partner
Non-smoker.

# Instructions for the patient Paul Jackson

You are 20 years old and will soon start a painting and decorating apprenticeship.

As a child you had asthma. Four weeks ago you had a cold and since then you have had a cough. The cough is dry and worse at night; your girlfriend is getting really irritated by it. You are worried because you are short of breath and wheezy after exercise. You can manage only around 10 minutes of playing soccer before coming off. It feels as though your asthma has come back.

The following information is on your medical record:

**Past medical history**
Childhood asthma

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Maternal osteoporosis

**Social history**
Lives with de facto partner
Non-smoker.

## Instructions for the facilitator

Please give the doctor the following information when requested specifically:

Height 1.85 m

Pulse 92

Blood pressure 106/70 mm Hg

No cyanosis

Talking in sentences

Respiratory
- —Respiratory rate 14/min
- —No use of accessory muscles
- —Chest expansion normal
- —Percussion note normal
- —Widespread wheeze on auscultation
- —Oxygen saturation 99% in room air

| | |
|---|---|
| Peak expiratory flow rate actual | 350 L/min |
| Peak expiratory flow rate predicted | 580 L/min |
| Peak expiratory flow rate after salbutamol | 450 L/min |

Please hand these results to the doctor if spirometry is requested:

| | | | |
|---|---|---|---|
| Actual: | FEV1 3.5 L | FVC 5.78 L | Ratio FEV1/FVC 60.5% |
| Predicted: | FEV1 5.05 L | FVC 6.09 L | Ratio FEV1/FVC 82.9% |
| After salbutamol: | FEV1 4.3 L | FVC 5.82 L | Ratio FEV1/FVC 73.9%. |

## Suggested approach to the case

Establish rapport

Brief summary of history—for example, 'So I have read that you used to have asthma. You had a cold recently and you are now wheezy and out of breath. I'm going to find out the results of the physical examination and then we can chat about what to do.'

Request permission to examine.

### Ask for the examination findings

Pulse 92

Blood pressure 106/70 mm Hg

No cyanosis

Talking in sentences

Respiratory
- —Respiratory rate 14/min
- —No use of accessory muscles
- —Chest expansion normal
- —Percussion note normal
- —Widespread wheeze on auscultation
- —Oxygen saturation 99% in room air
- —Peak expiratory flow rate 350 L/min
- —Predicted peak expiratory flow rate 580 L/min
- —Peak expiratory flow rate 450 L/min after salbutamol
- —Spirometry as above.

### Diagnosis

Moderate asthma.

### Management

Explain likely recurrence of asthma

Asthma can recur in adulthood

Assure Paul that asthma can be treated

Moderate persistent asthma—start both preventer and reliever

Commence low-dose inhaled steroids

On suggestion of starting inhaled steroids, watch for emotional reaction and respond appropriately

Enquire sensitively about the reasons for the concern about steroids, for example, Paul's mother developed osteoporosis

Outline risks and benefits of inhaled steroids and their mechanism of action, in particular addressing any concerns raised by Paul

Plan follow-up and development of an asthma plan

Assure Paul that asthma should not stop him starting his apprenticeship but to observe any impact from paint fumes

Advise on when to return for follow-up, and to contact urgently if condition gets worse

Other health promotion—use of alcohol and other drugs.

## Case commentary

The key issue in this case is to explain to Paul that it is most likely his asthma has returned.

According to the National Asthma Council's *Asthma Management Handbook*, Paul has moderate persistent asthma for which a reasonable starting dose will usually be 100–200 mcg fluticasone propionate or beclomethasone dipropionate or 200–400 mcg budesonide.[1]

Optimal management will involve an inhaled beta-agonist administered through a spacer, commencement of inhaled steroids as above and early review to ensure best lung function is achieved, preferably assessed by spirometry. Subsequent visits can be used to maintain best lung function, minimise the use of medication, give Paul an asthma plan,[2] treat any associated allergic rhinitis[3] and include other health promotion activities such as discussing whether Paul uses alcohol or other drugs.

Paul can commence his apprenticeship but will need to observe any impact of paint fumes on his breathing.

# References

1. National Asthma Council 2006, *Asthma management handbook*, National Asthma Council, Melbourne, www.nationalasthma.org.au/cms/index.php, accessed 29 June 2010.
2. Rudolphy, S 2008, 'Asthma management in general practice: a chronic disease health priority', *Australian Family Physician*, vol. 37, no. 9, pp. 710–14.
3. Rimmer, J & Ruhno, JW 2006, 'Rhinitis and asthma: united airway disease', *Medical Journal of Australia*, vol. 185, no. 10, pp. 565–71.

# Case 67 Nicholas Morris

## Instructions for the doctor

This is a long case.

Please take a history and conduct an appropriate clinical examination. Discuss with the patient the most likely diagnosis and negotiate a plan for management.

**Scenario**

Nicholas Morris is 63 years old and has booked in to see you this morning. The last entry in the notes was five years ago when he attended after a dog bite.

The following information is on his summary sheet:

**Past medical history**
Dog bite

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil recorded

**Social history**
Maths teacher
Single
Smokes 30 cigarettes per day.

# Instructions for the patient Nicholas Morris

You are a 63-year-old maths teacher and a lifelong smoker. You enjoy smoking and get quite offended when people suggest that you should give up. Even the pupils at school keep telling you to stop when they see you smoking around town at the weekends. You only go to the doctor when you really have to.

In the last few months you have become increasingly short of breath. You take your dog for walks in the morning and this is getting more difficult. You have begun to arrive earlier at school so that you can get a parking space near the staffroom.

When asked by the GP you will reveal that you have had a productive cough in the mornings for the last few years. You have never coughed up blood. Colds 'always go to your chest' and when this happens you get a wheeze.

You have been saving up to visit your relatives overseas and are due to fly soon. You have made the appointment to discuss your breathlessness with the GP and want to know if there is any medication that will fix the problem.

## Clinical examination findings

Height 1.72 m

Weight 75 kg

BMI 25.3 kg/m$^2$

Tobacco stains on the fingers

No respiratory distress

Chest shape and expansion normal

Percussion normal

Auscultation reveals scattered wheezes

PEFR 320 L/min, predicted 620 L/min.

The following information is on your medical record:

**Past medical history**
Dog bite

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil recorded

**Social history**
Maths teacher
Single
Smokes 30 cigarettes per day.

## Suggested approach to the case

Establish rapport

Open-ended questions to establish Nicholas' ideas, concerns and expectations.

### Specific questions

Shortness of breath, including exercise tolerance

Cough

Haemoptysis

Sputum

Pain

Wheeze

Fever

Ankle swelling

Impact of symptoms on lifestyle and ability to work

Smoking history

Alcohol history

Family history

Systems review—include energy levels, sleep, weight loss or change in appetite

Request permission to examine.

### Examination

General signs
- —Weight and BMI
- —Cyanosis
- —Clubbing
- —Tobacco stains on the fingers

Respiratory system
- —Respiratory rate
- —Use of accessory muscles
- —Trachea
- —Nodes

—Chest shape
—Chest expansion
—Percussion
—Auscultation

Cardiovascular system
—Pulse
—Blood pressure
—Heart sounds
—Signs of cor pulmonale.

### Differential diagnoses

Chronic obstructive pulmonary disease

Carcinoma of the bronchus

Tuberculosis

Infection

Heart failure.

### Investigations

Spirometry including pre and post salbutamol

FBC

ESR or CRP

Sputum × 3 for AFB

UEC

LFTs

Fasting cholesterol

BSL

Chest X-ray.

### Management

Using the **COPD-X** management plan:[1]

**C**onfirm diagnosis and assess severity

Explain most likely diagnosis chronic obstructive pulmonary disease

Perform spirometry—airflow limitation not fully reversible

Inform that this illness is related to smoking

Assess ability to travel overseas.

**O**ptimise function

Inhaled bronchodilators

Pulmonary rehabilitation.

**P**revent deterioration

Use motivational interviewing techniques to discuss smoking

Outline options for assistance in giving up smoking

Immunisations—influenza

Mucolytics.

**D**evelop support network and self-management plan

GP and primary care team follow-up.

Manage e**X**acerbations (cover in subsequent consultations)
—Early treatment of infections with antibiotics
—Consider systemic glucocorticosteroids.

Other issues
—Check re alcohol consumption.



## Case commentary

This case tests the doctor's ability to identify chronic obstructive pulmonary disease as the most likely diagnosis and to engage with Mr Morris about the importance of giving up smoking. The COPD-X framework provides a useful mnemonic for the key information that should be covered in the next few consultations with Mr Morris. Further detail may be relevant to some patients and is available in the full guideline.[1]



## Common pitfalls

A poor doctor might display a judgmental attitude to the smoking and ignore the issue of the forthcoming holiday. A good doctor will use

motivational interviewing to assess Mr Morris's readiness to change and give practical advice about smoking cessation tailored to his readiness to quit (see Case 57 on pages 276–80).

A good doctor will acknowledge the importance of the holiday and assess Mr Morris's fitness to fly. If Mr Morris can climb a flight of 15 stairs and walk 50 metres without symptoms he should not experience problems during the flight.[2,3] As an extra, the issue of holiday insurance will be raised.

## References

1. McKenzie, DK, Abramson, M & Crockett, AJ et al. 2009, *The COPD-X Plan: Australian and New Zealand guidelines for the management of chronic obstructive pulmonary disease*, The Australian Lung Foundation, www.copdx.org.au, accessed 2010.
2. UK Civil Aviation Authority 2009, *Guidelines for medical professionals from the Aviation Health Unit*, www.caa.co.uk, accessed 2010.
3. Seccombe, L & Peters, M 2010, 'Patients with lung disease. Fit to fly?', *Australian Family Physician*, vol. 39, pp. 112–15.



# Case 68 Gary Robinson

## Instructions for the doctor

This is a short case.

Please take a history from Gary and conduct a focused examination. Please tell the observing examiner the most likely diagnosis.

**Scenario**

Gary is a 28-year-old doctor. He is a junior surgical trainee and works long hours. He rarely goes to see his GP and his work limits his time for exercise. Yesterday he developed chest pain and decided to come in for a checkup.

The following information is on his summary sheet:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil recorded

**Family history**
Father heart attack aged 53
Coronary artery bypass graft aged 60, now in late 60s

**Social history**
Not recorded.

# Instructions for the patient Gary Robinson

You are a 28-year-old Caucasian doctor. You are a junior surgical trainee and work long hours. You rarely go to see your GP and work limits your time for exercise. Yesterday you developed chest pain and because of your Dad's history of heart disease, you decided to come in for a checkup.

The chest pain is sharp and is in the left costosternal junction. You point to the tender area with your finger—you do not clench your fist.* The pain is worse when you take a deep breath. Last night you took some ibuprofen and this eased the pain. You have no alarm symptoms such as shortness of breath, wheeze, haemoptysis or cough.

On examination the only abnormal finding is tenderness on pressure over the left 3rd costosternal junction.

The following information is on your medical record:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Nil recorded

**Family history**
Father heart attack aged 53
Coronary artery bypass graft aged 60, now in late 60s

**Social history**
Not recorded.

*A patient who clenches their fist during an assessment should be taken seriously.[1]

## Suggested approach to the case

Introduction

Establish rapport

Explore Gary's ideas, concerns and expectations.

### History

—Chest pain—onset, location, duration, character, precipitating factors, relieving factors, severity, previous episodes of pain
—Shortness of breath
—Cough—productive or not
—Exclude haemoptysis
—Wheeze
—Palpitations
—Nausea, fever
—Recent travel, injury, exercise

Medication

Family history

Smoking history

Request permission to examine.

### Examination

Temperature—normal

No cyanosis, no clubbing

Blood pressure 122/80 mm Hg

Pulse 74 regular

Respiratory rate 12/min, no use of accessory muscles

Chest
—Inspection—normal
—Palpation—tender left 3rd costosternal junction
—Percussion—normal
—Auscultation—normal

Heart sounds normal.

### Most likely diagnosis

Tietze's syndrome or costochondritis.

## Case commentary

Chest pain is a common symptom with potentially serious underlying causes that Gary is very aware of, given his work as a doctor and his father's illness. He needs a doctor who will hear his concerns and assess him professionally. He will react badly to any hint of being patronised.

The physical examination should include assessing for chest wall tenderness. The pain is localised by one finger[1] and, in the absence of any symptoms of ischaemic heart disease[2] and the reproduction of his symptoms by pressure on the costosternal joint, a clinical diagnosis of Tietze's syndrome can be made.[3] No investigations are needed. Exploration of how Gary is coping with long hours and study is more likely to be helpful. Gary's family history does make him at higher risk of ischaemic heart disease and he may need encouragement to exercise regularly and eat well despite his work commitments.

Investigation would be indicated if Gary were at high risk of ischaemic heart disease (IHD), for example, if he was Aboriginal.[4] Chest pain accounted for 1.5% of GP consultations in one study and 8% of those patients were diagnosed with IHD.[5] There is evidence that those who are not initially diagnosed with IHD are more likely to be later diagnosed with IHD,[6] so GPs need to assess each episode carefully.

# References


1. Ponka, D & Kirlew, M 2007, 'Top 10 differential diagnoses in family medicine: chest pain', *Canadian Family Physician*, vol. 53, no. 12, p. 2146.
2. Flook, N, Unge, P & Agreus, P et al. 2007, 'Approach to managing undiagnosed chest pain: could gastroesophageal reflux disease be the cause?', *Canadian Family Physician*, vol. 53, no. 2, pp. 261–6.
3. Jensen, S 2001, 'Musculoskeletal causes of chest pain', *Australian Family Physician*, vol. 30, no. 9, pp. 834–9.
4. *Young v Central Australian Aboriginal Congress Inc & Ors* 2008, Supreme Court of the Northern Territory, p. 47.
5. Nilsson, S, Scheike, M & Engblom, D et al. 2003, 'Chest pain and ischaemic heart disease in primary care', *British Journal of General Practice*, vol. 53, no. 490, pp. 378–82.
6. Ruigomez, A, Masso-Gonzalez, EL & Johansson, S et al. 2009, 'Chest pain without established ischaemic heart disease in primary care patients: associated comorbidities and mortality', *British Journal of General Practice*, vol. 59, no. 560, pp. e78–86.



# Section 21 Urology
# Case 69 Tessa Martinez

## Instructions for the doctor

This is a short case.

Please conduct this consultation with Tessa as you would in clinical practice, knowing that Tessa has booked a short appointment.

**Scenario**

Tessa Martinez is a 42-year-old mother of two. She has been called for jury service next week. She has booked an appointment to see you to ask for a letter of exemption from jury service because of her incontinence. Tessa has not previously mentioned this problem to you.

The following information is on Tessa's medical record:

**Past medical history**
First child—SVD, weight 3.2 kg, episiotomy needed
Second child—SVD, weight 4.05 kg

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Nil known

**Social history**
Married, works at kennels
Non-smoker
Alcohol—not recorded.

# Instructions for the patient Tessa Martinez

The doctor has been asked to conduct this consultation with you as they would in clinical practice, knowing that a short appointment has been booked.

You are a 42-year-old mother of two. Life is going well except that since you had the children, who are now 8 and 10, you have had a problem with your 'waterworks'. You had hoped that this would improve but it is now so bad that 'when you have to go, you really have to go'. When you get the urge to pass urine, you leak a small amount of urine if you are unable to access a toilet promptly. Sometimes you need to pass urine every half an hour, and at the most can leave it an hour and a half. Your boss and family have just got used to this—though your husband can get irritated that you get up to go to the toilet twice during the night. You do not have any stress incontinence or any problems with your bowels.

Yesterday you received a letter calling you to jury service next week. You are worried about needing to go to the toilet too often during the cases. You decide to finally pluck up courage to tell your GP about the problem, so that you can get a note excusing you from jury service.

You are unaware that anything can be done for this problem. You will sound interested in any tests or treatment the doctor offers, providing that this is done professionally.

The following information is on your medical record:

**Past medical history**
First child—weight 3.2 kg, episiotomy needed
Second child—weight 4.05 kg

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Family history**
Nil known

**Social history**
Married, works at kennels
Non-smoker
Alcohol—not recorded.

## Suggested approach to the case

Establish rapport

Listen to the request for excusing from jury service

Empathise with Tessa about the potential for embarrassment in court

Acknowledge difficulty of problem but also that it is common

Agree to write a letter stating facts and outline that the final decision on her fitness to serve rests with the judge

Explain the potential benefits of conducting a full assessment, and that a range of treatments are available

Assessment of urge incontinence—will need to be staged, as only short appointment today.

### History

Incontinence—urge or stress or mixed

Details—how often, any precipitating or relieving factors

Exclude polydipsia, polyuria, dysuria or haematuria

Nocturia, use of pads

Abdominal or pelvic pain, bowel habit

History regarding deliveries

Medication history

Impact of foods or drinks such as tea, coffee or alcohol

Current contraception, date of last Pap smear.

### Examination

To be done at a planned appointment

—BMI
—Abdominal examination
—Pelvic examination including bimanual
—Observe vulval skin, check for atrophy
—Assessment of pelvic floor tone and strength including during a cough.

### Investigations

Blood glucose

Urine for microscopy, culture and sensitivity

Urine for protein (renal function)

Flow volume/bladder diary

Ultrasound scan—exclude incomplete emptying

Consider urodynamic study.

### Management

Provision of literature on topic

Exclusion of precipitants from diet—caffeine, tea, carbonated drinks, artificial sweeteners

Drink 1.5–2.0 L non-alcoholic, non-caffeine fluid per day

Bladder training—optional referral for physio/biofeedback/nurse continence advisor

Weight loss if overweight/obese

Arrange follow-up

Consider medication
- —Anticholinergics, e.g. oxybutynin
- —Uroselective anticholinergics, e.g. tolterodine, solifenacin
- —Tricyclic antidepressants, e.g. imipramine.



## Case commentary

This case requires the doctor to discuss the common but embarrassing problem of urinary incontinence. The case also tests time management and the doctor's ability to priortise what needs to be done today and to outline what can be done in the future.

The initial part of the consultation is to listen to Tessa's request for a letter regarding her suitability for jury service. The doctor needs to gather enough information to decide whether writing a letter is justified. Best practice is to avoid making promises beyond a GP's control and so a good doctor will explain that it is the judge who will make the decision about her suitability for service.

The second part of the consultation is to inform Tessa that much can be done for urinary incontinence. The doctor's demeanour needs to be open and empathic so as to encourage Tessa to open up about her problem and its impact on her life, and to choose to come back for an examination and investigations.

Depending on the definition used, urinary incontinence affects between 19.3–37.0% of Australian women, but many are reluctant to seek help.[1] GP management can significantly improve symptoms.[2] Weight loss in the obese and pelvic floor muscle training reduce incontinence but have more impact on stress incontinence than urge incontinence.[3, 4] Bladder training may help in urge incontinence,[5] particularly if combined with anticholinergic medication.[6, 7]

## References


1. Bricknell, S, Goss, J & Mann, N 2006, 'Australian incontinence data analysis and development', Australian Institute of Health and Welfare, catalogue no. DIS 44, www.aihw.gov.au/publications/dis/aidad/aidad.pdf, accessed 29 June 2010.
2. Santiagu, SK, Arianayagam, M & Wang, A et al. 2008, 'Urinary incontinence-pathophysiology and management outline', *Australian Family Physician*, vol. 37, no. 3, pp. 106–10.
3. Hay-Smith, J & Dumoulin, C 2006, 'Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women', in *Cochrane database of systematic reviews*, John Wiley, Chichester, UK.
4. Subak, LL, Wing, R & West, DS et al. 2009, 'Weight loss to treat urinary incontinence in overweight and obese women', *New England Journal of Medicine*, vol. 360, no. 5, pp. 481–90.
5. Wallace, SA, Roe, B & Williams, K et al. 2004, 'Bladder training for urinary incontinence in adults', in *Cochrane database of systematic reviews*, John Wiley, Chichester, UK.
6. Alhasso, AA, McKinlay, J & Patrick, K et al. 2006, 'Anticholinergic drugs versus non-drug active therapies for overactive bladder syndrome in adults', in *Cochrane database of systematic reviews*, John Wiley, Chichester, UK.
7. Nabi, G, Cody, JD & Ellis, G et al. 2006, 'Anticholinergic drugs versus placebo for overactive bladder syndrome in adults', in *Cochrane database of systematic reviews*, John Wiley, Chichester, UK.

# Section 22 Women's health
# Case 70 Liesl Bawden

## Instructions for the doctor

This is a short case.

Please take a history from Liesl. The results of a focused examination will be available from the facilitator. Outline your initial management to the facilitator.

**Scenario**

Liesl is 32 years old and is now 34 weeks pregnant in her first pregnancy. All her routine scans, checks and tests have been normal so far. You last saw her two weeks ago.

She comes to see you in your GP surgery and says that she would like some antacid for her indigestion and asks if she can take paracetamol for headaches.

The following information is on Liesl's summary sheet:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal last year

**Family history**
Nil significant

**Social history**
Lab technician
Non-smoker.

# Instructions for the patient Liesl Bawden

You are 34 weeks pregnant in your first pregnancy. So far all has been going well but over the last few days you have felt unwell. You have headaches and epigastric discomfort that you initially describe as indigestion. You decide to see the doctor for advice on what medication you can take, as the pharmacist recommended that you should.

When asked you will say that you are also nauseated and 'just don't feel right'. You do not have any visual symptoms and have not vomited. You feel lethargic. You have no reflux or burning as might occur in indigestion—you have epigastric discomfort and this is new.

The following information is on your medical record:

**Past medical history**
Nil significant

**Medication**
Nil

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal last year

**Family history**
Nil significant

**Social history**
Lab technician
Non-smoker.

## Instructions for the facilitator

On specific request only, please give the following findings to the candidate:

Obstetric examination—normal findings for 34 weeks gestation EXCEPT
- —Abdomen: epigastric tenderness
- —Oedema: pitting oedema at ankle level, no facial oedema
- —BP 140/100 mm Hg (reading two weeks previously was 126/80)
- —Reflexes brisk
- —Urine: 2+ of protein.

## Suggested approach to the case

Re-establish rapport

Explore Liesl's ideas concern and expectations.

### Specific questions

Recent history—story of increasing headaches, epigastric pain

Enquire about visual symptoms

Previous history of headaches, family history of migraine

Fetal movements

Swelling of feet

Request examination findings.

### Most likely diagnosis

Pre-eclampsia.

### Initial management

Immediate referral for specialist care and either day care or hospital admission.

## Case commentary

The key feature of this case is the identification of pre-eclampsia. The doctor needs to consider the potential cause of the headaches and indigestion rather than treat each symptomatically. Not all GPs choose to be involved in intrapartum care, but all should be competent in identifying pre-eclampsia. Intervention can save the lives of both the mother and her baby.

# Further reading

Brown, MA & Lowe, SA 2009, 'Current management of pre-eclampsia', *Medical Journal of Australia*, vol. 190, no. 1, pp. 3–4.

Society of Obstetric Medicine of Australia and New Zealand 2008, *Guidelines for the management of hypertensive disorders of pregnancy 2008*.

Wagner, I.K 2004, 'Diagnosis and management of preeclampsia', *American Family Physician*, vol. 70, no. 12, pp. 2317–24.



# Case 71 Jenny Butterfield

## Instructions for the doctor

This is a short case.

Please discuss with Jenny what you think may be causing the problem and how you plan to manage this situation.

**Scenario**

Jenny Butterfield is a 35-year-old woman who has heavy periods. Her periods are regular but last up to 10 days. For the first 3–4 days she is leaking despite wearing both tampons and sanitary pads. She has to change protection every half an hour and takes time off work during her period because of this. The periods are not painful. She has no other gynaecological symptoms and she does not pass clots. She is separated from her husband.

**Past medical history**
Two normal vaginal deliveries

**Medication**
Nil known

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal this year

**Family history**
Mother died of pancreatic cancer aged 53

**Social history**
Separated
Two children
Non-smoker

**Clinical examination findings**
Normal abdominal and pelvic examination.

# Instructions for the patient Jenny Butterfield

You are 35 years old and work as a receptionist. It is not easy to leave the reception desk to go to the toilet. Your last three periods have come on time but have been very heavy. The periods last up to 10 days. For the first 3–4 days you leak despite wearing both tampons and sanitary pads. You have to change protection every half an hour and because of this take time off work during your periods. The periods are not painful. You have no other gynaecological symptoms and do not pass clots.

You are separated from your husband. You will soon run out of sick leave and this worries you as you are bringing up two teenage children on your own.

The following information is on your medical record:

**Past medical history**
Two normal vaginal deliveries

**Medication**
Nil known

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Normal this year

**Family history**
Mother died of pancreatic cancer aged 53

**Social history**
Separated
Two children
Non-smoker

**Clinical examination findings**
Normal abdominal and pelvic examination.

## Suggested approach to the case

Establish rapport

Open questions to explore Jenny's ideas, concerns and expectations

Explain menorrhagia—probably idiopathic

Reassure Jenny that symptoms can be improved.

### Investigations

FBC and iron studies

Consider clotting factors and thyroid function tests.

### Treatment options

NSAIDs—check no contraindication

Antifibrinolytic such as tranexamic acid

Levonorgestrel releasing intrauterine device (Mirena)

Oral contraceptive pill—if no other risk factors

Ultrasound scan and endometrial sampling not needed initially

Consider referral for danazol, endometrial resection or ablation or hysterectomy if medical treatment is not effective

Offer to discuss with employer if Jenny wishes

Arrange follow-up.



## Case commentary

This case tests the doctor's ability to manage a common clinical problem, to recognise the impact of this problem on the patient's life and to negotiate management with the patient.

The regularity of the periods, and the absence of pain or any abnormalities on clinical examination make it most likely that this menorrhagia is idiopathic. A full blood count and iron studies should be done to exclude anaemia. Further tests such as an ultrasound scan and endometrial sampling are indicated if initial medical therapy is ineffective.

There is a range of effective options for menorrhagia. The doctor should outline these, avoiding medical jargon, and listen to Jenny's preferences.

## Common pitfalls

Progesterone reduces blood loss but is less effective than the Mirena IUS, danazol and tranexamic acid and is no longer drug of choice in this situation.

# Further reading

Apgar, BS, Kaufman, AH & Geroge-Nwogu, U et al. 2007, 'Treatment of menorrhagia', *American Family Physician*, vol. 75, no. 12, pp. 1813–19.

Farquhar, CM 2002, 'The levonorgestrel intrauterine system: a simple and effective alternative for the management of menorrhagia?', *Medical Journal of Australia*, vol. 177, no. 8, pp. 444–5.

Hickey, M & Farquhar, CM 2003, 'Update on treatment of menstrual disorders', *Medical Journal of Australia*, vol. 178, pp. 625–9.

Lethaby, A, Angood, C & Duckitt, K et al. 2007, 'Nonsteroidal anti-inflammatory drugs for heavy menstrual bleeding', in *Cochrane database of systematic reviews*, John Wiley, p. CD000400.

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Prentice, A 1999, 'Fortnightly review: Medical management of menorrhagia', *British Medical Journal*, vol. 319, no. 7221, pp. 1343–5.



# Case 72 Justine Geddes

## Instructions for the doctor

This is a short case.

Please advise Mrs Geddes regarding hormone replacement therapy (HRT).

**Scenario**

Mrs Justine Geddes is a 54-year-old woman who is on HRT. She started this after she developed vaginal dryness, hot flushes and night sweats and attended the GP to see if anything could be done. She has read an article in a magazine saying HRT causes breast cancer and heart attacks. She would like your advice on whether to continue HRT.

The following information is on her summary sheet:

**Past medical history**
Irritable bowel syndrome

**Medication**
Mebeverine 135 mg tds

**Allergies**
Nil known

**Immunisation**
Up to date

**Pap smear**
Normal 1 year ago

**Social history**
Shop assistant.

# Instructions for the patient Justine Geddes

You are a 54-year-old shop assistant. You have been on HRT since you complained to your GP about symptoms of vaginal dryness, hot flushes and night sweats. You also have irritable bowel syndrome and take mebeverine for it.

Life has been much better since you started the HRT but you are getting tired of regular periods. You are concerned about an article in a magazine that suggested HRT causes breast cancer and heart disease and have come to see your GP for advice on what to do.

You would like to come off the HRT but want your GP to outline the advantages and disadvantages of coming off. You do not currently have any menopausal symptoms.

Your mother died of breast cancer when she was in her sixties but there is no other relevant family history. You do not smoke. You have been on HRT for four years.

The following information is on your medical record:

**Past medical history**
Irritable bowel syndrome

**Medication**
Mebeverine 135 mg tds

**Allergies**
Nil known

**Immunisation**
Up to date

**Pap smear**
Normal 1 year ago

**Social history**
Shop assistant.

## Suggested approach to the case

Establish rapport

Open-ended questions to explore Mrs Geddes' ideas, concerns and expectations

### Specific questions

Explore her current menopausal symptoms

Determine family history, particularly of ischaemic heart disease, venous thromboembolism, breast cancer, or osteoporosis

Establish duration of taking HRT

Smoking status

Date of last mammogram

Explore patient's reasons for wanting to stop HRT

Outline known risk/benefit analysis of HRT and apply these to Mrs Geddes' situation

Offer Mrs Geddes an educational handout on HRT

Enable Mrs Geddes to make informed decision on whether to continue on HRT or not

Assure patient of continued support.



## Case commentary

The key issue in this case is for the doctor to incorporate up-to-date knowledge of HRT into a patient-centred discussion.

Ethical practice is that doctors 'first do no harm' in their efforts to alleviate and cure sickness. This principle is a challenge when it comes to prescribing HRT. HRT relieves menopausal symptoms and it was predicted to reduce heart disease and osteoporosis. It seems that HRT does not alter overall total mortality rates in younger postmenopausal women. There is a different outcome for older postmenopausal women, where the risk of heart disease, breast cancer, venous thromboembolism and stroke is increased, and the risk of bowel cancer and fracture is decreased.

The art of prescribing HRT is to ascertain the patient's symptoms and their personal risk profile based on their pre-existing likelihood of disease and age. In Mrs Geddes' case continuing HRT may further increase her already raised risk of breast cancer, and a withdrawal of HRT is advisable. If this leads to intolerable symptoms, lifestyle changes are ineffective and Mrs Geddes wishes to restart HRT and is aware of the risks—and this is documented in the notes—restarting HRT is an option.

## Further reading

MacLennan, AH 2007, 'HRT: a reappraisal of the risks and benefits', *Medical Journal of Australia*, vol. 186, no. 12, pp. 643–6.

National Prescribing Service 2004, 'Finding the balance: the who and WHI of hormone replacement therapy', *National Prescribing Service Newsletter*, no. 32.

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Salpeter, SR, Cheng, Ji & Thabane, L et al. 2009, 'Bayesian meta-analysis of hormone therapy and mortality in younger postmenopausal women', *American Journal of Medicine*, vol. 122, no. 11, pp. 1016–22.e1.



# Case 73 Vikki Nicolaides

## Instructions for the doctor

This is a short case.

**Scenario**

Vikki Nicolaides is a 34-year-old accountant. She has been living with her boyfriend for the past four years and they are considering starting a family. She has made this appointment to find out about when to stop the pill.

The following information is on her summary sheet:

**Past medical history**
Glandular fever
Mild anxiety—postgraduate exams 2000

**Medication**
Microgynon 30

**Allergies**
Nil

**Immunisations**
Nil recorded

**Pap smear**
Normal this year

**Social history**
Parents migrated from Cyprus in 1960s
Non-smoker
Binge drinking at university.

# Instructions for the patient Vikki Nicolaides

You are 34 years old and work long hours as an accountant. Over the past year you have been discussing with your boyfriend the possibility of starting a family. You want to know when to stop taking the pill but would be happy to have any other advice that the doctor offers you.

You have regular periods on the pill and your BMI is 24 kg/m$^2$.

The following information is on your medical record:

**Past medical history**
Glandular fever
Mild anxiety—postgraduate exams 2000

**Medication**
Microgynon 30

**Allergies**
Nil

**Immunisations**
Nil recorded

**Pap smear**
Normal this year

**Social history**
Parents migrated from Cyprus in 1960s
Non-smoker
Binge drinking at university.

## Suggested approach to the case

Establish rapport

Open questions to explore Vikki's ideas, concerns and expectations re this consultation

General health
- —Diet, check BMI, BP
- —Smoking
- —Alcohol intake—note past history
- —Exercise

Briefly review past medical history—include drug use (prescribed, over the counter and illicit), exclude diabetes, epilepsy, depression

Pap smear.

### Specific advice

Tailor advice to the answers given to the questions above, plus:

Diet and toxin avoidance
- —Folic acid
- —Avoid liver
- —Eat fish twice a week
- —Hygiene—fresh food, care with cat litter
- —Avoid environmental toxins

Optimising fertility
- —When to stop Microgynon—explore understanding of fertile time
- —Decreased fertility after age 35—information needs to be given sensitively

Immunisations and blood tests
- —Check rubella immunity and herpes zoster immunity, consider HIV test, Hep B test, RPR, TFTs

Chromosomal, genetic abnormalities
- —Need to check if any family history of thalassaemia or other inherited disorders, and offer screening
- —Availability of screening for cystic fibrosis
- —Availability of antenatal testing for Down's
- —Consider health insurance cover.

## Case commentary

Vikki attends this consultation just wanting to know about when to stop the pill. A good doctor will offer her much more than this and needs to decide on the priorities in the time available in this particular case. The main factors for Vikki are her age, family background and history of binge drinking.

Vikki's personal background that her parents migrated from Cyprus should alert doctors to ask about a family history of thalassaemia. Screening can be offered by a full blood count and red cell indices. A doctor would not necessarily remember the detail of the screening test but should know that it is available.

A leaflet summarising prenatal advice can supplement the information given during the consultation. The doctor needs to offer the advice such that Vikki wants to comply with it but is not so scared that she ignores it.

Pre-conception care can prevent a lifetime of problems for another human being, such as Foetal Alcohol Syndrome or congenital rubella, and is worth incorporating into routine care when discussing contraception.

# Further reading

Carl, J & Hill, AD 2009, 'Preconception counseling: make it part of the annual exam', *Journal of Family Practice*, vol. 58, no. 6, pp. 307–14.

Lu, MC 2007, 'Recommendations for preconception care', *American Family Physician*, vol. 76, no. 3, pp. 397–400.

Muchowski, K & Paladine, H 2004, 'An ounce of prevention: the evidence supporting periconception health care', *Journal of Family Practice*, vol. 53, no. 2, pp. 126–33.

Tough, SC, Clarke, M & Clarren, S 2005, 'Preventing fetal alcohol spectrum disorders. Preconception counseling and diagnosis help', *Canadian Family Physician*, vol. 51, p. 1199–201.



# Case 74 Clarice Scott

## Instructions for the doctor

This is a short case.

Please take a focused history from Clarice. Then outline to her what examination, investigations and management you propose. This is Clarice's first visit to your practice.

**Scenario**

Clarice Scott is a 24-year-old sales representative for an IT company. She comes to see you complaining of recurrent thrush. She keeps buying creams and pessaries over the counter. The thrush clears but then it comes back again.

The last time she bought cream from the chemist she was told that she had to see a GP about the problem. This is Clarice's first visit to this practice.

# Instructions for the patient Clarice Scott

You are a 24-year-old sales representative for an IT company. In the past three months you have had three episodes of what you have assumed is thrush. You have had an itchy, white vaginal discharge. You have bought clotrimazole (Canesten) cream and pessaries from pharmacists whilst travelling interstate. Using the clotrimazole has resolved the symptoms. The last pharmacist advised you to see your GP about the thrush.

This is the first visit to this GP. If asked sensitively you will tell the GP the following information:

**Past medical history**
Termination of pregnancy aged 17

**Medication/drugs**
Diane ED
Intermittent use of recreational/illicit drugs such as ecstasy while travelling interstate

**Allergies**
Nil

**Immunisations**
Up to date including gardasil × 3

**Pap smear**
Normal one year ago

**Social history**
Sales representative
Not in a steady relationship but recent one-night stands while travelling
Smokes 15 cigarettes per day.

## Suggested approach to the case

History

Establish rapport

Open questions to explore Clarice's ideas, concerns, expectations.

### Specific questions

Discharge—colour, consistency, smell, duration, whether clears completely with treatment

Irritation, itching, burning, dyspareunia, dysuria

Relationships and sexual behaviour, assess level of risk taking

Menstrual cycle—relationship to symptoms

Check use of contraception, medication (antibiotics) and drugs

Date of Pap smear

Past history of STI, previous checks for STI including HIV

Health/symptoms of sexual partners

General health—thirst, weight loss, sleep, energy levels, diet

Request permission to examine.

### Examination

General appearance

Abdominal examination

Pelvic examination including bimanual

Include inspection for secondary causes of thrush such as warts, ulcers

Detail of the discharge including its smell.

### Investigations[1]

Chlamydia/gonorrhoea NAAT (vaginal self-collected/first-catch urine/endocervical)

Endocervical swab for m.c.s.

High vaginal swab for m.c.s.

Bacterial vaginosis: vaginal pH and 'whiff' test (if available)

Urine glucose or BSL

Blood test for HIV, Hepatitis B/C, syphilis

Plan for repeat of HIV test.

### Treatment options

Empathy regarding symptoms, treatment dependent on results

Explanation of need to make diagnosis

Commonest causes of vaginal discharge: vaginal candidiasis (thrush), bacterial vaginosis and trichomonas

Recurrent thrush (definition is four episodes per year)—trial suppression therapy

Recommend use of condoms to avoid other STI

Recommend partner screening, no treatment needed if asymptomatic and tests clear

No evidence of usefulness of oral or vaginal lactobacillus[2]

Other recommendations (evidence limited): avoid excess washing, ensure adequate lubrication during intercourse, and avoid tight-fitting clothes

If time available, brief intervention regarding use of illicit drugs.

## Case commentary

Research shows that clinicians cannot confidently distinguish between the three common causes of vaginitis by symptoms or signs alone.[3] Testing is needed to target treatment appropriately. Useful clues are that candidal infection causes inflammation, itch and an odourless 'cottage cheese' discharge; bacterial vaginosis may have a 'high cheese' odour on examination.

Recurrent thrush is a common problem affecting 5% of pre-menopausal women.[4] The GP should have a logical framework for the history and then be able to explain the process of examination, investigation and treatment to Clarice.

Recurrent thrush is initially managed by excluding underlying causes followed by treatment with a longer course of standard treatment. Next is a trial of either oral or vaginal regular suppression therapy. Some women seem to have an abnormal host response to candida making relapse after treatment more likely. Candida glabatra may respond to flucytosine or boric acid pessaries.

# References

1. Dayan, L 2006, 'Pelvic inflammatory disease', *Australian Family Physician*, vol. 35, no. 11, pp. 858–62.
2. Pirotta, M, Gunn, J & Chondros, P et al. 2004, 'Effect of lactobacillus in preventing post-antibiotic vulvovaginal candidiasis: a randomised controlled trial', *British Medical Journal*, vol. 329, no. 7465, p. 548.
3. Anderson, MR, Klink, K & Cohrssen, A 2004, 'Evaluation of vaginal complaints', *Journal of the American Medical Association*, vol. 291, no. 11, pp. 1368–79.
4. Sheary, B & Dayan, L 2005, 'Recurrent vulvovaginal candidiasis', *Australian Family Physician*, vol. 34, no. 3, pp. 147–50.



# Case 75 Ellie Todd

## Instructions for the doctor

This is a short case.

Please take a focused history from Ellie and discuss your proposed management with her. Relevant physical findings will be available from the facilitator.

**Scenario**

Ellie Todd is a 15-year-old girl who attends the local TAFE college. She has asked for an urgent appointment this morning.

The following information is on her summary sheet:

**Past medical history**
Asthma as a child

**Medication**
Nil currently

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Nil known.

# Instructions for the patient Ellie Todd

You are a 15-year-old girl who attends the local TAFE college. You have asked for an urgent appointment this morning as you had unprotected intercourse with a new boyfriend last night. You feel embarrassed about what happened and do not want your parents to find out. Your parents are both patients at the practice.

You are feeling fine physically and want to do all that you can to prevent pregnancy and sexually transmitted infections. Your last menstrual period was two weeks ago.

The following information is on your medical record:

**Past medical history**
Asthma as a child

**Medication**
Nil currently

**Allergies**
Nil

**Immunisations**
Up to date

**Pap smear**
Nil known.

# Information for the facilitator

### Clinical examination findings

BP 112/78 mm Hg.

# Suggested approach to the case

Establish rapport

Assure of confidentiality subject to legal obligations

Open-ended questions to explore Ellie's concerns and expectations.

### Specific questions

Was sex unprotected? Timing, any other unprotected sex this cycle?

Establish that sex was not forced or as a result of drugs/alcohol as Ellie is under 16

Date of LMP, usual cycle

Exclude pain, discharge, dyspareunia or other current symptoms

Past medical history—exclude current migraine, past thromboembolism

## Ask for the examination findings

—BP 112/78 mm Hg.

### Management

Explain issues of avoiding unwanted pregnancy and sexually transmitted infections plus planning future care

Immediate need for emergency contraception

Offer levonorgestrel 1.5 mg stat

Outline instructions and make arrangements for follow-up

Screen for sexual infections
—Urine NAAT for chlamydia and gonorrhoea
—Self-collected vaginal swab for MCS and NAAT
—Blood tests—HIV, syphilis, Hepatitis B and Hepatitis C

Longer-term health

- —Offer ongoing contraception
- —Advise re need for a Pap smear two years after first sexual intercourse
- —Advise of other resources such as local STI or family planning clinics and offer leaflets
- —Subtly encourage Ellie to talk with her family.



## Case commentary

The key issues in this case are assuring Ellie of your confidentiality, preventing pregnancy, managing the risk of sexually transmitted infections and discussing Ellie's future sexual health.

Emergency contraception is available over the counter. Good general practice requires that the GP offer more than this and in as non-judgmental manner as possible. This may be Ellie's first such request and how it is handled may determine her willingness to seek assistance in the future.

The law regarding under-age sex and the GP's role varies across the states and territories. It is reasonable for each doctor to answer according to the law where they work. While the doctor and Ellie may consider confidentiality essential, this cannot be assured if by doing so the GP breaks the law; for example, in the Northern Territory the GP is required to report this case to the police if sex was non-consensual or abuse is suspected.

Ellie is in the high-risk part of her cycle for pregnancy. She should be offered postcoital contraception and be encouraged to take it as soon as possible for maximum effectiveness. The doctor should ensure that there were no previous episodes of unprotected sexual intercourse this cycle. If there were, a copper-bearing intra-uterine contraceptive device could still be used with antibiotic cover, as Ellie is not more than five days after the most likely calculated date of ovulation. Mifeprostone is more effective as an emergency contraceptive than levonorgestrel[1] but it is not yet available in Australia.

Ellie should also be offered screening for STIs. The incubation period for these infections means that repeat tests must be offered at a later date—for example, for HIV at three months. Self-collection of a swab and urine is less invasive for patients.

The doctor should explore Ellie's future contraceptive, sexual health needs and offer follow-up.

# Reference

1. Cheng, L, Gulmezoglu, AM & Piaggio, G et al. 2008, 'Interventions for emergency contraception', in *Cochrane database of systematic reviews*, no. 2, p. CD001324.

# Further reading

Foran, T 2002, 'Emergency contraception', *Australian Family Physician*, vol. 31, no. 10, pp. 909–12.

Kang, M, Skinner, R & Foran, T 2007, 'Sex, contraception and health', *Australian Family Physician*, vol. 36, no. 8, pp. 594–600.

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